THE

ENGINEERING AND MINING JOURNAL.

VOLUME LII., JULY TO DECEMBER, 1891.

INDEX.

A

Aaron, C. H., on Furnace Dust..... 49
Aaron, C. H., on Gold Precipitation... 211
Aaron, C. H., on Jet Propulsion..... 211
Abbott, C. H..... 14
A. B. C., on San Miguel Gold Mg. Co. 697
Abel, Frederick A..... 51
Abercanaid Colliery, So. Wales..... 337
*Abrasive Processes in Mechanic Arts. *95, 188
Aby-sinian Mg. Claim, Mont..... 172
Academy of Natural Sciences.....272, 484
Acadia Coal Co., N. S..... 278
Accidents in Coal Mines, 98, 122, 219, 621, 622
*Accumulator, Tommassi..... 643
Acheson Coke Co., Pa..... 225
Acid Market Review.....Weekly
Acids and Aluminum..... 611
Ackerman, John K., Death of..... 509
Acme Cement Plaster Co., Kans..... 538
Acme Coal Mg. Co., Colo..... 274
Adams, Chas. Francis..... 13
Adams, Freeborn, Death of..... 706
Adams Mg. Co., Colo.....53, 249, 366
Adams, W. H., on Florida Phosphates.....592, 612, 642, 674
Adams & Co..... 130
Adella Mg. Claim, Utah..... 226
Adulterations in Basic Slags..... 676
Adventure Mine, Mich.....315, 598
African Mining News..... 735
Agerter vs. Vandergrift, Pa..... 306
Agricultural Implements, Exports of, from U. S..... 12, 129
Agricultural Implements in Spain.... 12
Aguilar, Jose Guadalupe..... 200
Aide-Memoire du Chimiste..... 67
Aids in Practical Geology..... 92
*Air Bath, White's..... 75
Air, Compressed, at Offenbach..... 305
*Air, Compressed, Causing Disease, 73, 119, *186
Air, Formulæ of Compressed..... 48
Alabama Iron & R'way Co., Ala..... 79
Alabama Mining News, 13, 52, 79, 104, 130, 339, 433, 458, 485, 510, 573, 646, 683
Alabama Rolling Mills, Ala... 12, 221, 248
Alamo Mine, Coahuila..... 200, 252
Alaska Coal Co., Alaska..... 222
Alaska-Treadwell Gold Mg. Co., Alaska, 52, 79, 128, 248, 365, 459 510, 596, 621, 707
Alaskan Mining News, 13, 52, 79, 104, 222, 237, 248, 365, 420, 459, 510, 596, 707
Alaskan Railroad..... 13
Alavieska Mg. Co., Mont..... 81, 342, 512
Albatross Mine, Mont..... 172
Albion Slate Quarry, Pa..... 462
Albuquerque Fair..... 462
Alexander Mine, Colo 274
Algerian Phosphates..... 614
Alhambra Mg. Co., N. M..... 710
Alice Mg., Claim, B. C..... 134
Alice Mg. Co., Mont.....199, 368, 487
Alice Placer Mg. Claim, Colo..... 105
Alkali Industry of England 4
*Alkali Process, Simpson..... 332
Alkali Union, 83, 109, 135, 175, 201, 227, 253, 318, 371, 437, 489, 577, 625
Allegheny Bessemer Steel Works, Pa. 103
Allegheny Mine, Cal..... 274
Allegheny Mine, Idaho..... .....80, 223
Allegheny Mg. Co., Colo. 511
Allen, E. C..... 129
Allen & Harch, Mo 132
Alliance Mg. Co., Utah.....200, 226, 277
Allison Coupon Co..... 730
Allison, Jonathan..... 82
Allison Ranch Mine, Cal..170, 274, 393, 459
Allison, Wm. C., Death of..... 645
Allouez Mg. Co., Mich..14, 80, 105, 131, 171, 250, 315, 434, 538, 648, 816
Alloy for Accumulators, New..... 684
Alloy for Sealing Glass Tubes..... 426
Alloys, Electrolysis of 564
Alloys, New..... 478, 529
Alloys of Manganese, Copper, Aluminum.....47, 301
Alpha Cons. Mg. Co., Nev..... 623
Alpha Gold Mg. Co., N. M..... 199
Alpha Mine, Mich 80
Alphand, Chas. Adolphe, Death of... 682
Alps Cons. Mine, Colo..... 197
Alta Mg. Co., Nev., 55, 106, 132, 173, 224, 251, 317, 342, 369, 428, 649, 685, 733
Altoona Quicksilver Mines 485
Alumina Carbon..... 371
Aluminum, 47, 50, 127, 157, 168, 220, 261, 267, 301, 330, 432, 585, 611, 636, 677, 699, 701, 705, 728, 730
Aluminum Alloy Metal Co., Ia..... 432
Aluminum Co., Ltd., Eng..... 338
*Aluminum Sm. Dynamo..... 193
Amador Median Mg. Co., Cal..... 339
Amalgamated Assn. of I. and S. Workers, 13, 19, 20, 78, 86, 103, 129, 130, 169, 247, 273, 364, 645
Amber Mg. Claim, S. Dak..... 107
American Assn. for Advancement of Science..... 244
American Assn. of Inventors and Manufacturers..... 391
American Automatic Lighting Co.... 338
American Axe & Tool Co..... 273, 392
American Belle Mines, Ltd., Colo ,14. 53, 80, 91, 274, 340, 366, 511, 621
American Bridge Mfrs.' Assn..... 484
American Chemical Society...221, 244, 645 730
American Coal Co., Ala 616
American Engineers and M. Eiffel... 247
American Flint Glass Workers' Assn. 51
American Forestry Assn.....620, 720
American Gaslight Assn..... 484
American Girl Mines, Colo..... 537
American Gold Mg. Co., N. M..... 342
American Goods Wanted Abroad.... Weekly
American Institute Fair..... ...196, 458
American Institute of Mg. Engrs...4, 103 338, 353, 422, 682
American Iron & Steel Assn 92, 101
American-Italian Exhibition..... 272
American Loan & Trust Co. vs. Gogebic Dev. Co..... 226
American Marble Co., Ga..... 105
American Methods of Copper Smelting, Peters'.....563, 631
American Mines and English Investors..... 117
American Mg. & Sm. Co., Colo., 223, 340, 573, 647
American Oil in China..... 56
American Ore Machinery Co., N. Y., 13, 509, 535
American Petroleum Co..... 169
American Pig Iron Market Review, Weekly
American Prospects in Singapore.... 129
American River Co., Ltd., Cal..... 313
American Rolling Mills, Evolution of, 590, 616
American Screw Co., R. I..... 12
American Sisters Mg. Co., Colo..... 130
American Smelter Co., Kan..... 432
American Society of Civil Engineers. 484
American Society of Mech. Engrs., 4, 391, 509, 594
American Spelter Co., Kan..... 393
American Sulphur Co, La..... 486
American Tin Plate Co 312, 338, 484
American Tripoli Mines, Mo..... 276
American Tube & Iron Co., Pa.....51, 604
American vs. English Courtesy..... 93
American Wire Nail Co., O..... 13
American Zinc Lead Co., Colo..... 183
Amherst Mine, Cal..... 313
*Ammonia Engine 51, *101, 445
Ammonia Soda Process in England.. 4
Ammonite, a New Explosive. 220
Ammonium Chloride in Carnallite, Kieserite, &c..... 681
Amsterdam Petroleum Co..... 169
Anaconda Mg. Claim, Colo..... 104
Anaconda Mg. Co., Mont...81, 132, 172, 394, 435, 440, 466, 487, 490, 492, 512, 538, 623, 684
Analysis Methods, International .. 361
Anchor Mg. Co., Utah..15, 226, 318, 514, 540
Anderson, Geo. K., Death of..... 169
Anderson Iron Co., Ind 13
Anderson, James..... 314
Andes Mine, Nev..... 81
Anglo-American Iron Co., Ontario... 735
Anglo-American Mining Companies. 117
Anna Howe Gold Mg. Co., Ala....339, 459
Anna & Lillian Mg. Co., Mo..... 368
Annealing Furnace..... 263
Anniston Pipe Works, Ala..... 52
Annual Report of Bureau of Steam Engineering.....158, 262
Annual Report of Dept. of Mines of Queensland..... 446
Annual Report of Geological Survey of Canada..... 446
Annual Report of Mass. State Board of Health..... 498
Annual Report of N. Y. State Engineer and Surveyor..... 472
Annual Report of the Chief of Engineers..... 610
Annual Report of the Commissioner of Labor..... 610
Annual Report of the Director of the Mint..... 697
Anson S. Mine, N. M.....369, 710
Antelope Mine, N. M..... 599
Anthracite Coal Only at World's Fair 347
Anthracite Coal Trade.....Weekly
Anthracite Coal & Imp'mt Co..... 465
Anthracite Culm, Utilization of..... 424
Anti-Debris Question in Cal..... 104
*Anti-Friction Bearings..... 75
Antidote to Acid in Boiler Feed Water 263
Antimony Deposits of the West..... 1
Antimony in France..... 318
Antimony in Japan..... 600
Antimony in Nevada..... 585
Antimony in Portugal..... 266
Antimony Market Review. .....Weekly
Antimony, Metallurgy of 119
Antimony Mine, Idaho. 393
Anvill Rock Mg. Co., Indian Ty... 341
Appalachian Ltd. Mg. Co 710
Apatite Discovery in Va..... 650
Apatite Mining in Canada..... 635
Apex Mine, Mont..... 623
Apex Mg. Claim, B. C 576
Aqua Ammonia Engine. 51
Arabian Salt Gardens 219
Aragon Mg. Co., Mich..... .....105, 435
Arcadia Mine, Mich 250
Archdale Phosphate & Mg. Co., S. C. 319
Archer Vein Colliery, Pa..... 277
*Argall, Philip, Life of..... 689
Argentine Juniata Mg. Co., Colo..... 14
Argentine Mines, Idaho 646, 732
Arizona Copper Co., Ariz 196
Arizonia Mineral Resources..... 704
Arizona Mining News 52, 79, 104, 130, 170, 196, 222, 248, 273, 313, 339, 365, 393, 433, 459, 485, 510, 573, 596, 646, 683, 707, 731
Ark Mine, Ariz..... .....393, 731
Arkansas Mining News.....170, 339, 459
Arkansas Valley Sm. Co., Colo., 79, 223, 340, 459, 593
Arlington Mine, Va..... 514
Armada Mine, Mont..... 199
Armand Mines, N. S..... 541
Armenia Mine, Mich..... 435
Armor Plate Ingot, Large..... 128
Armor Plate Tests.....77, 327, 428, 535, 596
Armstrong, J. E..... 645
*Armstrong, Mitchell & Co.'s Large Guns..... 311
Arnold Mg Co., Mich.....224, 367, 434
Arrayanes Lead Mines, Spain..... ... 600
Arsenic and Antimony Separated..... 526
Arsenic Production in England..... 96
*Arthur's Rope Grip..... 271
*Arthur's Swivel Box Hanger..... 219
Artificial Ivory..... 334
Artificial Mericlase..... 681
Asbestos in Cal..... 274
Asbestos in Canada..... 134
Asbestos in Hungary and Wales 588
Asbestos in New South Wales..... 56
Asbestos in S. Dak..... 55
Asbestos Packing Co., N. Y.....51, 103
Asbestos Production in U. S..... 270
Asbestos Works Consolidate..... 51
Ashland Fire Brick Works, Ky..... 485
Ashland Steel Co, Ky..... 485
Ashworth, James, on Miners' Eyesight 77
Aspen Belt Mine, Colo..... 130
Aspen Contact Mg. Co., Colo.....131, 708
Aspen Mine, Colo..... 647
Aspen Mg. & Sm. Co., Colo..... 647
Asphalt, Artificial..... 239
Asphaltum in U. S.....1, 193
*Assay Furnace..... 363
Assessment Work on Placer Claims.. 92
Assessments.....Weekly
Assignment of Patents..... 127
Assn., Amal. of I. and S. Workers. 13, 19, 20, 78, 86, 103, 129, 130, 169, 247, 273, 364, 645
Assn., American Bridge Mfrs'..... 484
Assn., American Flint Glass Workers' 51
Assn., American, for the Advancement of Science..... 244
Assn., American Gaslight..... 484
Assn., American Forestry..... .....620, 720
Assn., American Iron and Steel... 82, 101
Assn., American, of Inventors' and Mfrs'..... 391
Assn., Brick Mfrs'..... 391
Assn., Buffalo Car Service..... 738
Assn., Central Traffic 230, 250
Assn., Comstock Pumping 55
Assn., Engineering of the South' 457, 516, 706
Assn., German Mg..... 56
Assn., Lumber Dealers'..... 57
Assn., Mfg. Chemists of U. S..... 600
Assn., Monmouth Coal Owners'..... 56
Assn., National Boiler Inspectors'.... 457
Assn., National Electric Light..... 196
Assn., National Electrical..... 312
Assn., National, of Govt. Geologists.. 312
Assn., National Street R'way..... 484
Assn., N. Y. Tax Reform..... 609, 620
Assn. of Engineers of Virginia..... 459
Assn., Oil Producers' Protective..... 462
Assn., Phillipsburg, Beech Creek & Osceola Check Weighman..... 82
Assn., Seaboard 281
Assn., Southern Immigration..... 273
Assn., United Mine Workers'.317, 436, 689
Assn., U. S., of Charcoal Iron Wrkrs. 221
Assn., Western Traffic.....18, 204, 321, 339
Astor Mine, Mo..... 14
Astoria Mg. Claim, Cal..... 707
Atherton, T. W. T., on Gold in Form of Natural Sulphide..... 698
Atikokan Iron Range, Canada..... 686
Atkinson, Edward.....157, 160, 358
Atkinson, Edward, on Silver Question 157, 160
*Atkinson's Elec. Cable for Coal Mines..... 386
Atlanta Mine, Idaho..... 366
Atlanta Mg. Claim, Colo..... 314

Atlantic Iron Works, Pa..... 13
Atlantic Mg. Co., Mich., 14, 54, 80, 171, 394, 434, 511, 538, 648, 684
Atlantic Trust Co..... 248
Atlas Mine, Mich..... 80
Attalla Iron & Steel Co..... 248
Attic R'way Co., Greece 318
"A Typical Case"..... 93
Auction Sale of Stocks..... Weekly
*Augers, Improved..... 643
Aurora Coal Co., Pa..... 396
Austin Mg. Co., Nev..... 359, 395, 488
Austin, T. S..... 169, 196
Australian Gold Mines..... 327
Australian Mining News..... 253, 278
Australian Tin Mines..... 271
Austrian Chem. & Metallurgical Co. 515
Austrian Coal Production 174
Austrian Mining News..... 515, 686
Austrian Zone R'way. System..... 184
*Automatic Starting Gear for Gas Engines..... 309
A. V. B. Mg. Claim, Colo..... 105
*Awl, Safety Scratch..... 268
Axe Workers' Strike..... 273
Ayer, Ira 572, 682
Ayston, E. F..... 169
A. Y. & Minnie Mine, Colo..... 537
Aztec Coal Co., N. M..... 277
Aztec Mg. & M. Co, N. M..... 252, 369

B

Babcock & Wilcox Co., N. Y..... 12, 78
Bacon, D. H..... 457
Badger Mine, Mich..... 487
Badger Mine, S. Dak..... 82
Badlam, Alex..... 391
Badt's, F. B., *Electric Transmission Handbook*..... 158
Bahamas, Imports from U. S..... 12
Bailey, C. Stuart..... 247, 355
Baird, John, Death of..... 484
Baisley-Elkhorn Mine, N. M..... 133
Baker, John S..... 535
Baker, P. R..... 338
Baker-Whiteley Coal Co..... 373
Baku Naphtha Industry..... 193
Balance, Serrin's..... 211
Bald Eagle Mine, Alaska..... 237
Bald Mtn. Extension Mg. Co., Cal. .. 313
Baldwin, Andrew J..... 515
Baldwin, W. J..... 391
Ball, Thos..... 51
Balmoral Mg. Co., Colo 79
Baltimore Coal Trade..... 373
Baltimore United Oil Co., Md. 129
Baltimore & Ohio R. R..... 18, 85, 173, 713
Bandora Mines, Colo..... 131, 249, 393
Bangor Union Slate Co., Me 51
Bankok—Cora Belle Mg. Co., Colo. 29, 340, 459, 486, 597
Banner Group of Mines, Idaho..... 646
Banner Mg. Co., Cal..... 170
Bar Iron Market Review..... 629, 690
Barbed Wire Trust..... 130
Barbee & Glover 132
Barbour, Prof. E. H 301
Barden *et al* Northern Pacific R. R.. 54
*Barker, T. B. & Co..... 309
Barnes, Wm. Frank, Death of..... 682
*Bartine, H. F., on Free Coinage 471, 472, 497, * 493, 635
Bartlett, C. H..... 51, 129
Bartlett, F. L..... 183, 221
Bartow Phosphate Co., Fla 223
Barytes Production in U. S..... 304
Basic Slag and Phosphoric Acid..... 362
Basic Slags, Adulterations in 676
Basic Steel Manufacture 303
Bassett Mine, Utah..... 107
Bast Colliery, Pa., on Fire..... 15
Batchelder, C. S..... 484
Bates-Hunter Mine, Colo..... 249, 314
Baumeister's, K., *Sewerage of Cities*, 446
Bauxite Discovered in France..... 174
Baxter, Malcolm 713
Baxter Mine, Colo 486
Bay State Mg. Co, Cal..... 170, 273
Bayliss, R. F..... 196
Bayliss vs. Dillon..... 589
Beach Creek R. R. Co., Pa..... 59, 134
Beatrice Mg Co., N. M..... 488
Beattie, James F 391
Beck & Co.'s Salt Works, Pa. 319
Becker, Prof. F..... 222
Beckwith Chas. C., Death of..... 169
Beckwith, J. M..... 457
Becquerel's Discovery of Native Fluorine..... 48
Beddall Bros..... 599
Beeger, Hermann, Death of..... 706
*Beetaloo Dam, So. Australia..... 47
Beggs, Jas. & Co., N. Y..... 269
Belcher Mg Co., Nev., 15, 173, 224, 488, 599, 623, 649, 685, 709
Belden, Thos. E., Death of..... 78
Belgian Coal Mines..... 238, 385
Belgian Mining News..... 56, 226, 344, 370
Belgian Nickel and Copper Imports.. 646
Bell, Lewis & Yates Coal Mg. Co., Pa 82
Bellaire Goblet Co., O..... 139
Belle Isle Mg. Co., Nev., 15, 55, 81, 132, 173, 316, 368, 394, 512, 539, 599, 623, 648, 684, 709
Belle of Butte Mine, Mont..... 199
Bellefonte Nail & Iron Co..... 682
Bellingham Bay & B. C. R. R..... 540
Bellow's *Manual of Land Surveying* 3
Bell's Asbestos Co., Ltd, Ont..... 174
Belmont Cons. Gold Mg. Co., Colo., 393, 537, 736
Belvidere Mines, N. J..... 106
Ben Harrison Mg. Claim, Mont. 106
Benedict, W. de L..... 432
Benjamins, Reuj., Inquiry..... 41
*Bennet, F. R., on White's Air Bath.. 75
Bennett Stephenson Mine, N. M..... 342
Bennett, T. H..... 196
Benton Cons. Mg. Co., Nev..... 173, 488, 709
Benton Mine, Utah..... 396
Bentz Bar Mg. Claim, Colo..... 433
Benz Bar Mine, Cal..... 683
Berdan's Fuse for Bombs..... 75
Berkeley Mine, Ariz..... 365
*Berlin Iron Bridge Co., Conn..... 106, *384, 391, 457, 484, 620
Berner Bay Mg. Dist., Alaska..... 52
Bertha Zinc Co., Va 576
Berthon's Mine Telephone..... 123
Bertrand's, P. H., Process for Rendering Iron Rust-Proof..... 588
Berwind-White Coal Mg. Co., Pa., 15, 462, 513
Bessemer Cons. Iron Co., Mich..... 538
*Bessemer, Henry, on Mfr. of Continuous Sheets of Iron and Steel Direct from Fluid Metal..... 473
Bessemer Rolling Mills, Ala..... 364
Best Friend Mg. Co., Colo..... 708
Best & Belcher Mg. Co., Nev..... 106
Bethlehem Armor, etc 236
Bethlehem Iron Co., Pa., 39, 51, 169, 196, 247, 457
Bethlehem Steel Co..... 79
Bethune, G. H..... 278
Bettel, W., on Matte Smelting for Copper and Silver in Reverberatory Furnaces..... 74, 160
Bevington Welding Process 698
Bewick, Moreing & Hooper..... 620
Bibliotheca Polytechnica..... 354
Bicycles of Aluminum..... 267
Bidwell's Heat Engine..... 5
Big Bend Mine, Cal..... 339
Big Cañon Mg. Tunnel, Cal..... 131
Big Creek Antimony Co., Nev. 106, 539, 585, 599, 709
Big Eight Mine, Idaho..... 752
Big Run Mine, Mo..... 54, 512
Big Soda Mine, Idaho..... 366
Big Stone Gap Coal Co., Va 514
Bigelow, Hobart B., Death of. 457
Bigelow, Prof. Frank H..... 432
Bi-Metallic Mg. Co., Mont ... 198, 316, 461
Bingham Mine, Utah 65, 82, 133
Bird Coleman Furnace, Pa..... 247
Bird, Frank A 169
Birkinbine, John, on U. S. Iron Production..... 445, 454
Birmingham Mg. & Mfg. Co. and Tenn. C. I. & R. R 52
Birmingham Rolling Mill Co., Ala ... 13
Bishop, H. R..... 457
Bismuth in Silver Refinery Slags..... 571
Bituminous Coal Tariff..... 157
Bituminous Coal Trade..... Weekly
Biwabic Iron Co., Minn..... 368, 622
Black Bart Mine, Idaho..... 80, 223
Black Bear Mine, Idaho..... 249
Black Bear Mine, Mont..... 81, 342
Black Bear Mine, Wash..... 650, 734
Black Coulee Coal Fields, Mont..... 198
Black Diamond Coal Co., Pa., 252, 370, 396
Black Diamond Coal Co., Wash.... 15, 108
Black Diamond Mg. Co., Colo..... 366
Black Eagle Mine, Colo..... 621
Black Knob Mg. Dist., Nev 623
Black Mg. Claim, Wash..... 436
Black Warrior Mine, Cal..... 274
Blackburn, Chas. T., on Free Coinage 610
Blackjack Mine, Wis..... 174
Blackstone Mine, Mont 623
Blackwell's, Geo. G., Report on Liverpool Chemical Market, 21, 57, 135, 201, 279, 319, 437
Blake, W. P..... 119, 272
Blake, W. P., on Colorado Desert Flood..... 119
Blalock Mg. Claim, B. C..... 134
Blanche Coal Co., W. Va..... 514
Blandon Iron & Steel Co., Pa..... 484
Blasquez, Juan B 174
*Blast Furnace, Apparatus for Charging..... 532
Blast Furnace in Iron Co., Utah..... 225
Blast Furnace Temperature 220
Blast Furnace Using Coal 100, 162
Blast Furnacemen's Wages in Ohio .. 457
Blast Furnaces Using Concentrates.. 423
Blewitt, Patrick 252
Blood, A. R., Death of..... 645
Bloomingdale Mg. Claim, Cal..... 131
*Blow, Alfred A..... *121, 572, 620
Blue Bell Mine, B. C..... 15
Blue Bird Mine, S. Dak 107
Blue Bird Mg. Co., Mont., 117, 435, 487, 575
Blue Cañon Coal Co., Wash., 463, 540, 600
Blue Iron Mg. Co. Mich..... 394
Blueness of the Sky..... 73
Bluestone Quarries in N. Y..... 173, 248
Bob Tail Mine, Colo..... 170, 314
Bodie Cons. Mg. Co., Cal..... 13, 365, 372
Bohn Mg. Shaft. Colo..... 511, 573
Boiler Feed Water, Antidote to Acid in..... 263
Boiler Inspectors' Assn..... 457
Boiler Iron Tests..... 423
Boilermakers' Union, National..... 247
Boker Mine, Mont..... 342
Bolerite, New Mineral 611
Bolivia and Brazil, Railroad Between 56
Bolivian Mining News..... 318
Bolton Mines, S. C..... 107
Bomb Fuse, Berdan's..... 75
Bonanza Mine, N. M..... 317, 369
Bonanza Mine, Wash..... 108, 278, 576
Bonded Goods Transported Over Canadian Roads..... 272
Bonded Warehouses in Nicaragua ... 12
Bonds of U. S. 4½%..... 19
*Bonney Lathe Dog..... 614
Books Received..... Weekly
Borax Deposit in Wash..... 734
Borax Deposits of the West..... 1
Borings in Broadway, N. Y 103
Borneo Mg. Co., Colo..... 314
Boss, M. P. on Transvaal Ores..... 67
Bosson, F. N..... 12, 276
Boston Coal Trade ..... Weekly
Boston Colliery, Pa..... 173
Boston Gold Mine, U. S..... 278, 463
Boston-Idaho Mg. & M. Co., Colo..... 366
Boston Iron & Steel Co., Pa 78, 221
*Boston Mfrs.' Mutual Fire Ins. Co.. 358
Boston Mg. Co., Colo..... 105, 249
Boston Mining Stocks..... Weekly
Boston & Albany R. R. Co..... 39
Boston & Colo. Sm. & Refg. Co., Colo 433, 596
Boston & Mont. C. & S., Mg. Co., Mont., 15, 81, 106, 172, 276, 368, 427, 435, 487, 512, 524, 538, 625
Boulder Chief Mine, Mont..... 316
Boulder Mg. Dist., Colo..... 485
Boulder Mg. & Sm. Co., Mont..... 461
Bower, J..... 130
*Bowden, J. H., on Water Hoisting Tanks 530
*Bowden's, J. H., Rope Haulage Systems 161
Bowlders, Large 726
Boyce, John, Death of..... 221
Boyd, Dawkins, Prof., on England's Coal Supply..... 302
Boyle, E. D..... 173
*Boynton, S. S., on River Mining in California 266
Boys, C. Vernon, on Moon's Heat..... 41
Bradford Mine, Cal 647
*Bradley Dumping Car..... 389
Bradley Mine, Ore..... 711
Bradley Mines, S. C..... 107
Brainerd, Col. Wesley 53, 197, 626
Brandis Mfg. Co., N. Y..... 738
Brandt, Randolph..... 572
Brandt, Richard..... 201
*Branner, John Carver, Life of..... 675
Branner's, J. C., Report on Arkansas Geological Survey..... 302, 328
Braschi, Victor M..... 432
Bratnober, Henry..... 196
Bravo, Abel..... 432
Brazilian Cables..... 12, 391, 536
Brazilian Mining News..... 56
Brazilian Railroads..... 56, 272
Brazilian Trade..... 389
Bread Stuffs, Exports of U. S..... 338
Breece Mg. Co., Colo..... 486, 683, 708
Bremen Mill, N. M..... 252
Brewer Bros., Mo..... 461
Breyfogle Mine, Nev..... 55
Brice Bros., Pa..... 130
Briceville Mines, Tenn., 203, 225, 252, 317, 343, 370, 396, 576, 650
Brick Mfrs.' Assn..... 391
Brick Market Review, 21, 57, 109, 135, 175, 201, 227, 253
Brickell, E. J., Death of..... 391
Bricklayers' Strike in Neb..... 175
Bricklayers' Strike in N. Y..... 227
Bricks and Brickmaking..... 262
Bridge Across Missouri River, Mont.. 593
Bridge Across Ontonagon River, Mich..... 169
Bridge Mfrs.' Assn..... 484
Bridge, North River..... 619
Bridge, Winona..... 51
*Bridgeman's Sampling Machine..... 701
Brieg's Separation of Zinc..... 44
Briggs, Robt., Death of..... 484
Briggs Rolling Mill Co., O..... 338
Brimstone Exports of Sicily..... 21
Briquettes Mfd. from Coal Dust..... 382
Brisbin Mine, Pa..... 727
Bristol Mines, Ont 174
Bristol Mg. Co., S. Dak..... 133
Bristols vs. Scranton Steel Co..... 322
British Columbia Mining News, 15, 56, 108, 134, 174, 278, 370, 436, 651, 735
British Columbian Railroads. 15
British Guiana Mining News..... 56
British India, Population of..... 48
British Iron Trade Assn. on Iron and Steel Industries..... 40
British Minerals at World's Fair..... 727
Brittner, Arthur..... 272
Britton Co., O..... 13
Brock's, S. G., Report on U. S. Internal Commerce..... 92
Broken Hill Proprietary Co., Ltd N. S. W..... 329, 497, 530, 134, 261
Brooklyn Mines, Utah..... 82
Brooklyn Mines, Wyo..... 226
Brough, B. H..... 727
Brown, H. C. and Ingram Mg. & M. Co., Colo 130
Brown, J. W..... 81
Brown, Rev. John Jackson 221
Brown, T. F., on England's Coal Supply..... 302
Brown, Wm. H., Sons..... 650
Brownlow Mg. Co., Colo..... 348
Brownstone Quarries of Wis..... 200
Brunner, J. P., & Co's. Report on Liverpool Fertilizer Market.... Weekly
Brunswick Cons. Gold Mg. Co., Cal. 339, 372, 438, 625, 736
Brunswick Mill, Nev..... 224
Brunton, D. W..... 170
Brush Electric Co..... 130
Bryan, A. E 735
Bryant, Geo. S 388
Buckeye Engine Co., O..... 51, 432
Buckeye Iron Mg. Co., Mich 574
Buckhorn G. & S. Mg. Co., Utah..15, 82, 253, 370
Buckhorn M. & M. Syndicate, Colo... 597
Buckley, F. G..... 131
Buena Vista Electric Light Co., Colo. 621
Buena Vista Furnace, Va..... 364
Buffalo as a Railroad Center..... 137
*Buffalo Automatic Injector..... 643
Buffalo Car Service Assn..... 738
Buffalo Coal Trade..... Weekly
Buffalo Copper Co., Ariz 537
Buffalo Harbor Improvements..... 111
Buffalo Mg. Claim, Cal 131
Building Materials...21, 57, 83, 109, 135, 175, 201, 227, 253
Buildings Insured Against Collapse . 301
Bull-Domingo Mg. & Leasing Co., 79, 223, 269, 314
Bullion Beck & Champion Mg. Co., Utah..... 133, 174, 200, 343, 462, 526
Bullion Mine, Wash..... 226
Bullion Mg. Co., Nev..... 199, 623
Bullion Mg. Co., S. Dak 15, 200
Bullion Output of Comstock Lode, Nev..... Weekly
*Bullock, M. C., Life of..... 97
Bulwer Cons. Mg. Co. Cal. 179, 131, 273, 365
Bullysharp Mines, Colo..... 274
Bunker Hill Gold Mg. Co., Colo..... 196
Bunker Hill & Sullivan Mg. Co., Idaho 67, 99, 197, 250, 275, 366, 537, 648
*Bunsen Burner..... 533
Burfiend, J. H..... 51
Burgess, Edward, Death of..... 78
Burleigh Tunnel Co, Colo..... 53
Burling, Benj. L., Death of 221
Burlington Air Ship Co., Ia..... 103
Burmah Ruby Mine Co., Ltd..... 48
Burmese Tin Mines..... 674
Burnies', R. M. *Memoir and Letters of Sidney Gilchrist Thomas*..... 159
Busch Center Mg. Dist., Mo..... 647
Bushnell, Daniel, Death of..... 78
Bushwhacker Mg. Co., Colo., 14, 131, 170, 314
Butte Miners' Union..... 316
Butte Mg. Dist., Mont..... 623
Butte Mg. & M. Co., Mont..... 435
Butte Smoke Nuisance 247, 733
Butte & Boston Mg. Co., Mont., 173, 199, 276, 394, 436, 461, 487, 512, 648
Butte & Montana Commercial Co., Mont..... 394
Buttercup Mg. Co., Idaho..... 366
B. & F. Mg. Claim, Mont 172

C

Cabañas, Lamberto..... 200
Cabinet Mountain Mg. Co., Idaho 393
*Cable, Electric, for Coal Mines..... 386
Cable Hoists and Locked Ropes..... 424
Cable, Trans-Pacific..... 187
Cables in Brazil..... 12, 391, 536
Caceres Phosphate Mines, Spain..... 463
Cactus Copper Co., Utah..... 82
Cady, C. H..... 391
Caillard's, E. M., *Electricity*..... 118
Cajalco Mine, Cal..... 131, 365
Calcutta's Boycott of English Goods . 129
Caledonia Gold Mg. Co., S. Dak..... 252
Caledonia Mine, Nev..... 709
Calhoun Mine, Ga..... 340
Calico Mines, Cal..... 313
California Coal Co., Pa..... 173, 462
California Glass Co..... 682
California Iron, Steel & Tin Plate Co., Cal..... 510
California Law Prohibiting Stock Gambling..... 319
California Mill, Nev..... 224, 251
California Mine, Cal..... 597
California Mine, Mont..... 199, 598
California Mining News, 13, 52, 79, 104, 131, 170, 196, 222, 273, 313, 339, 365, 393, 433, 459, 485, 510, 537, 573, 596, 621, 647, 683, 707, 731
*California Prospector, the Old 567
California River Mining..... 636
California Tin Mines, 52, 104, 131, 273, 301, 313, 339, 365, 433, 459, 485, 510, 537, 695, 710
Calkins, J. M..... 312
Calkins Steam Indicator..... 66
Callaghan, H. C..... 197
Callendar & Griffiths..... 4
Calliope Mg. Co., Colo 314
Calumet Iron & Steel Co. Ill..... 484
Calumet Mg. Co., S. Dak..... 488
Calumet & Hecla Mg. Co., Mich., 14, 54, 171, 176, 224, 341, 367, 434, 451, 538, 598, 684, 714, 719
Cambria Iron Co., Pa., 12, 78, 129, 169, 273, 338, 343, 364
Cambria Mg. Claim, Cal..... 131
Camden, Johnson N..... 706
Cameron, John H., Death of..... 535
Camp Seco, Cal..... 273
*Campbell Ammonia Engine..51, *101, 445
Campbell, James..... 312
Canada, Area of..... 728
Canadian Apatite Mining..... 635
Canadian Coppor Co., Ont..... 56, 174, 735
Canadian Mining News, 56, 108 134, 174, 226, 278, 436, 463, 489, 541, 576, 600, 651, 686, 735
Canadian Phosphate Lands..... 109
Canadian Railway Traffic..... 306
Canadian Roads Carrying Bonded Goods..... 272
Canal, Chesapeake & Ohio..... 373
Canal, Columbia..... 620
Canal, Corinth 332
Canal, Delaware & Raritan..... 737
Canal, Illinois & Michigan..... 519
Canal in Germany..... 363
Canal in Sweden..... 279
Canal, Lehigh & Delaware..... 653
Canal, Manchester Ship 269
Canal, Morris..... 653
Canal, North Buffalo..... 248
Canal, Portage Lake..... 54, 105, 198
Canal, Sault Ste. Marie, 230, 356, 457, 458, 465, 713
Canal, Schuylkill..... 653
Canal, Suez..... 101
Candelaria Water-Wks & Mg Co., Nev 81
Candice Mine, Colo..... 275
Cañon of Colorado River..... 79
Cape Copper Co., Ltd., Newfoundland, 370, 651
Capitol Mine, Colo..... 14
Capitol Mine, Wash..... 540
*Car, Bradley Dumping..... 389
Car Lubrication..... 92, 236
Car Trust..... 52
*Carbon in Iron and Steel. *68, 235
Carbon Iron Co..... 169, 247
Carbon Iron & Pipe Co., Pa..... 230
Carbon Mine, Wyo..... 318
Carbon-Nickel Oxide..... 7
Carbonate Extension Mg. Co., Mont.. 198
Carbonate Hill Mg. Co., Colo..... 366, 719
Carbonate Mine, Cal..... 79, 274
Carbonate Mine, Colo..... 486
*Carbonic Dioxide in Furnace Gases, Apparatus for Determining..... 526
Carbonic Oxide and Iron..... 70, 618
Carbonic Oxide and Heat..... 270
Carbonic Oxide and Nickel ... 7, 353, 355
Carbonic Oxide, Reaction of..... 211, 246
Cargo Muchaco Mine, Cal..... 52, 274
Cariboo Mg. Claim, B. C..... 134

Caribou Mine, Colo....340, 731
Carmen Island Salt Mines....225
*Carnegie, Andrew....*5, 535, 572, 596
Carnegie, Andrew, on Silver Question, 39, 41, 66, 76, 166, 186
Carnegie Bros. & Co., Pa....13, 457
Carnegie, Phipps & Co., Pa., 128, 169, 392, 396, 432, 535, 620, 706
Carolina Mine, Utah....133
Carpenter, L. G....12
Carrera, Prof. J. C....225
*Carriage Jack, Spartan....123
Carrie Furnace Co., Pa....535
Carroll Bros., Ont....169, 203
Carter Mine, Mont....368
Cascade Mg. Dist., Wash....600
Case, Allene....196
*Case Engine....167
Cashman vs. Root....84
Cassel Gold Extracting Co., Africa....735
*Cast-Iron and Steel Tired Wheels....93
Cast Iron, Desulphurizing Molten....251
Castle Gate Mine, Utah....213
Castle Coal & Coke Co., Mont....199
Castle Mg. Dist., Mont....435, 609
Castle View Mg. Co., Colo....597
*Castner's Sodium Process....533
Catalogue of Minerals and Synonyms....210
Catalpa Mg. Co., Colo....14, 647
Cataract Mg. Co., Mont....316
Catasauqua Mg. Co., Pa....13
Catasauqua Rolling Mill, Pa....129
Catlin, R. M....364
Cato Mine, Colo....14
Catoctin Mine, Ariz....781
Caustic Soda Process....570
Cave Discovered in Oregon....71
Cayuga Mine, Pa....277
Cedar Grove Mg. Co., W. Va....650
Cedar Mountain Steel Co., Tenn....169
Cedros Island Mg. & M. Co., Lower Cal....134, 600
Cement for Iron Casting....47
Cement Manufacture in Turkey....363
Cement Market Review....21, 57, 83, 135
*Cement Testing Machine, Michele's....11
Centennial-Eureka Mg. Co., Utah....82, 650
Centennial Mine, Colo....104
Centennial Mine, Wyo....226
Centennial Mg. Co., Mich., 54, 105, 132, 172, 198, 250, 367, 434, 538, 684
Central Aspen Silver Mg. Co, Colo....275
Central City Miner's Union, S. Dak....55
Central City Window Glass Co....103
Central Iron & Steel Co., Ind....103
Central Mg. Co., Mich., 80, 315, 434, 538, 684
Central Traffic Assn....230, 250
Centrifugal Ventilators....424
Cerrillos Coal & Iron Co., N. M....462
Cerro Blanco Mines, Ariz....339
Cerro Blanco R. R., Sonora....278
Cerro Colorado Gold Mg. Co., Chihuahua....344
Ceylon Mining News....318
Ceylon, Plumbago Mining in....724
Chadbourne, A....196
Chairman Mine, Nev....488
Challenge Mg. Co., Nev....523
Chalmers-Spence Co., N. Y....51, 103
Chamber of Commerce, N. Y....572
Chambers, James A....319
Champion Mine, Cal....597
Champion Mines, N. Z....200
Champion Mg. Co., Mich....598
Champion Mg. Co., Mont....8), 172, 198
Chance-Claus Method in England....4
Chance Mg. Claim, Utah....318
Chandler Iron Co., Minn....363, 684
Chandler Mine, Minn....574
Chapin Mg. Co., Mich....622
Chaplin, Prof. W. S....272
Chappell, Edward, Death of....467
Charcoal Iron Workers, Assn. N. S....221
Charleston Mg. & Mfg. Co., S. C....107
Charlotte Furnace Co., Pa....78
Chatfield Mg. Claim, Colo....170
Chattanooga & N. Ga. Mica & Mg. Co., Ga....340
Chemical and Mineral Market Review....Weekly
Chemical Glassware, Labeling....50
Chemical Market, Liverpool..21, 57, 135, 201, 279, 319, 437
Chemical Society, American..221, 244, 645, 730
Cheminant, Alexis....247
Chemistry of the Carbon Compounds, etc....328, 720
Cherokee Mine, Cal....573
Chesapeake & Ohio Canal....373
Chestatee Gold Mg & Dredging Co., Ga. 683
Chester, Albert H....364
Chester Fdy. & Machine Co., Pa....484
Cheyenne, Mg. Convention, Wyo....56
Cheyney, Geo. W., on Florida Phosphates....525
Chicago Coal Trade....Weekly
Chicago Iron Market Review...Weekly
Chicago Iron Works, Ill....78
Chicago Lead Market Review...Weekly
Chicago, Milwaukee & St. Paul R. R....105, 203, 393
Chicago & Colo. Mg. Co., Colo....53
Chicago & Eastern Illinois R. R. 574, 598
Chicago & Minnesota Iron Co....112
Chicago & Northwestern Ry....315, 735
Chickasaw Coal Co., Ala....339
Chihuahua Mining News..56, 108, 200, 344
Chilian Import Duties....12, 391
Chilian Mining News....735
Chilian Nitrate Industry..135, 397, 437
Chilian Trade....392
Chilian War and Nitrate Industry....135
Chilled Iron for Crushing Rolls....676
Chimney Draughts....594
China, Coal Imports of....12
China, Imports and Exports of....39
China, Oil Imports of....56
Chinese Mining News....56, 437
Chinese Farming....129
Chinese Silver Mining in Mongolia....335
*Chinese System of Gold Milling....640
Chism, Richard E....78
Chispa Mg. Co., Nev....55
Chloride Mine, Ore....624
Chloride of Calcium for Gasholders....98
Choctaw Coal & Mg. Co., Indian Ty..171
Choctaw Coal & Ry. Co., Indian Ty..275
Chrysolite Mg. Co., Nev., 15, 132, 173, 224, 277, 369, 395, 462, 488, 513, 539, 575, 599, 624, 649, 685, 709
Christiana Window Glass Co., Del....254
Christina Lake Placers, Wyo..370, 436
Chrome Ores, Oxidized....194
Chromium Ores, Oxidation of....390
Chrysolite Silver Mg. Co., Colo....459
Church, John A....706
Church & Sleight, N. B....271, 533
*Church's Double Speed Indicator....120
Cincinnati Corrugated Roofing Co., Ill....458
Cincinnati Corrugating Co., O....432
Cincinnati Iron Co., Minn....648, 706
Cinnabar Discovery in Cal....249
Cinnabar Discovery in Ore....575
Cities, Sewerage of....446
City Point Iron Works, Mass....518
City & So. London Elec. R'way, Eng. Civil Engineers, Amer. Society of....484
Claghorn, Clarence R....620
Clarion & Tylersburg Gas Co., Pa....436
Clark-Bigelow-Lewisohn Party....80
Clark Mine, Mont....81
Clarke, B. G....572
Clarke, Dr. Wm. B....646
Claudia J., Mg. Co., Colo....340
Clay Co. Mine, Colo....314, 340
Clay, Properties of....532
Clayton Air Compressor Works....457
Clayton, H. H., on the Clouds....427
Clayton Mg. & Sm. Co., Idaho....131
Cleaning and Sewerage of Cities....446
Clearfield Coal Co., Pa....650
Clemens, Geo. S....229
Clement, V. M....67, 99
Clement, V. M., on Ore Handling at Bunker Hill Mine, Idaho....99
Cleveland Iron Cliffs Mg. Co., Mich..460
Cleveland Iron Market Review, 205, 374, 441, 605
Cleveland Iron Mg. Co., Mich....708
Cleveland Mine, Mont....251
Cleveland Mg. Co., Cal....274
Clinton Coal & Coke Co., Pa....650, 624
Clinton Cons. Mg. Co., Cal., 222, 249, 596, 621
Clinton Peak Mine, Cal....222
Cloud Heights....427
Clowes, Frank, on Safety Lamps....212
Coahuila Coal Co....253
Coahuila Mining News....200, 253, 344
Coal and Coke, Sulphur in....50
Coal Beds and Oil Wells....369
*Coal Bucket, Ludlow's....11
*Coal Conveyor, Hunt's....9
*Coal Cutter, Van Depoele Solenoid....245
*Coal Cutter, Thomson-Van Depoele....677
Coal Deposits in Germany....46, 187, 728
Coal Discovery in Alberta....327
Coal Discovery in Asia....479
Coal Discovery in Ceylon....318
Coal Discovery in Chili....735
Coal Discovery in Conn....366
Coal Discovery in Germany....318
Coal Discovery in Idaho....131
Coal Discovery in Ill....171, 460
Coal Discovery in Maine....223, 275
Coal Discovery in Mont....80, 199, 598
Coal Discovery in Pa....624
Coal Discovery in Sonora....226
Coal Discovery in So. Africa....318
Coal Discovery in So. Australia....57, 358
Coal Discovery in S. Dak....200
Coal Discovery in Spain....57
Coal Discovery in Texas....200
Coal Discovery in Utah....318
Coal Discovery in W. Va....174
Coal Exchange, N. J....59
Coal Exchange, N. Y. Retail...255, 689, 737
Coal Imports of U. S....627
Coal Field of N. E. Illinois....360
Coal Fields of Manitoba....108
Coal Fields of Transylvania....686
Coal Fields of Wash....226, 245
Coal Freights in Belgium....370
Coal Freights, Western....18, 59
Coal Fuel Used Under Boilers....312
*Coal Grate, McClave....269
Coal Imports of China....12
Coal in Lead Blast Furnace....100, 162
Coal in Russia, English....263
Coal in Vessels, Duty on....713
Coal Industry of Belgium....385
Coal Industry of Indiana....574
Coal Industry of Russia....8
Coal Inspection by Coxe Bros. & Co..424
Coal Mine Accidents...98, 122, 219, 621, 622
Coal Mine Foremen Examined in Pa..107
Coal Mine Inspectors Examined in Ill. 105
Coal Miners and Weekly Payment Law in Ill....14, 105
Coal Miners' Strike in Belgium....56, 226
Coal Miners' Strike in B. C....651
Coal Miners' Strike in Colo....707, 732
Coal Miners' Strike in France....600, 725
Coal Miners' Strike in Ill....105, 250, 315
Coal Miners' Strike in Ind....15, 574, 732
Coal Miners' Strike in Iowa....598
Coal Miners' Strike in Kan....434
Coal Miners' Strike in N. M....55
Coal Miners' Strike in Ohio....15, 106, 317, 396
Coal Miners' Strike in Pa....107, 133, 317, 370, 396, 462, 488, 513, 539
Coal Miners' Strike in Tenn....101, 133, 318
Coal Miners' Strike in Wash....15, 108
Coal Miners' Strike in W. Va....344
Coal Miners' Wages and Schuylkill Coal Exchange, Pa....55, 277, 539
Coal Miners' Wages in England....56
Coal Miners' Wages in Ind....511
Coal Miners' Wages in Pa....82, 107, 173, 203, 252, 321, 369, 539
Coal Mines in Alaska....620
Coal Mines in Belgium....238
Coal Mines in Coahuila....344
Coal Mines in Nebraska....710
Coal Mines in Turkey....728
Coal Mines in Wales....337
Coal Mines Using Steel Girders....102
Coal Mining in India....268
Coal Owners' Assn., Monmouth....56
Coal Points....380
Coal Production in Austria....174
Coal Production in Belgium....344
Coal Production in Cape Breton....281
Coal Production in England....735
Coal Production in Europe....671
Coal Production in France....220, 344
Coal Production in Holland....421
Coal Production in Italy....11
Coal Production in Ohio....229
Coal Production in the South....167
*Coal, Spontaneous Ignition of....306
Coal Supply of England....302
Coal Tariff....151
*Coal Tests, Review of, 430, 450, 476, *504
Coal Trade Situation....585
Coal Trade Reviews, Boston, Buffalo, Chicago, Pittsburg....Weekly
Coal Under City Streets....168
Cobalt Ore, New Process of Treating. 385
Cobalt Ores, Metallurgy of....424
Cochran Releaser Process....53
Code, a New Mexican....272
Coe, Israel, Death of....730
Cœur d'Alene Gold Mg. Co., Idaho....341
Cœur d'Alene Silver-Lead Mg. Co., Idaho....14, 16, 171, 537, 732
Coffey, B. H., on Rope Transmission of Power....456
*Cogswell, Wm. B., Life of....475
Coinage Act of 1873....362
*Coinage of Silver, Free, 1, 8, 39, 40, 41, 52, 53, 55, 66, 67, 76, 157, 158, 160, 166, 186, 237, 263, 303, 328, 329, 362, 421, 446, 447, 471, 472, 497, *498, 523, 525, 564, 587, 610, 635, 671, 672, 673, 698
Coinage of the World....40
Coinage of U. S. Mints, 19, 178, 282, 400, 514, 654
Coins, Foreign and Domestic....Weekly
Coins, Value of Foreign....60
Coke, Recovery of By-Products in....610
Coke Workers' Strike in Pa....343, 513
Coke Workers Uniting....689
Colby Mine, Mich....684
Cold Spring Mine, Cal....197, 339
Coldstream Mg. Co., N. S....56
Cole, T. F....391
Coleman, John, Death of....338, 364
Coleman, L....247
Cole's, G. A. J., *Aids in Practical Geology*....92
Collieries, Overwinding in....474
Collins, Henry T., on a Typical Lease. 93
Collins, James L., Death of....221
Colombian Mining News....344
Colorado Boy Silver Mines, Ltd., Colo. 574
Colorado Blue Book for 1891....3
Colorado Cent'l Cons. Mg. Co., Colo., 223, 340
Colorado Coal & Iron Co., Colo., 169, 197, 683, 707, 732
Colorado Desert Flooded, 9, 65, 93, 119, 209, 537
Colorado Fuel Co., Colo....229, 339
Colorado Grand Cañon Mg. & Impt. Co....79
Colorado Marble Co., Colo....104, 170, 433
Colorado Mining News, 14, 53, 79, 104, 130, 170, 197, 223, 249, 274, 313, 339, 365, 393, 459, 485, 510, 537, 573, 597, 621, 647, 683, 707, 731
Colorado Mg. Stock Exch., Colo....621
Colorado Mg. & Red. Co., Mont...461, 618
Colorado Ore Market....627
Colorado Scientific Society....361
Colorado Sm. Co., Colo....53
Coloration of Metals....456
Colored Exhibition at Raleigh, N. C. 273
Columbia Canal....620
Columbia Glass Co., O....130
Columbia Iron & Steel Co., Pa....51, 129
Columbia Mg. Co., B. C....134
Columbia Mine, Colo....53, 197, 486
Columbia Mine, Ga....683
Columbia Mg. & Land Co., Va....107
Columbia Patent Co....130
Columbia Rolling Mill, Pa....13
*Columbian Exposition, 48, 80, 104, 129, 172, 219, 225, 235, 247, 272, 338, 347, 379, *387, 391, 392, 433, 484, 535, 538, 574, 646, 706, 727
Columbus Borax Co., Nev....488
Columbus Mine, Colo....197
Columbus & Hocking C. & I. Co., O., 173, 199
Colville Mg. Dist., Wash....278
Colvin, Verplanck....391
Combination Mg. & M. Co., Mont., 54, 198, 435
Comet Mine, Ariz....313
Comet Mg. Claim, Cal....13
Comet Mine, Idaho....732
Comfort Cons. Mg. Co., Idaho....14
Commercial Mg Co., Ariz....731
Commonwealth Iron Co, Mich., 14, 487, 598
Commonwealth Mg. Co., Nev., 15, 173, 199, 368, 623, 648
*Compressed Air, Causing Disease, *73, 119, 186
Compressed Air Formulæ....48
Compressed Air System at Offenbach, 305
Compromise Mg. Co., Colo....486
Comptometer....389
Comstock as a Mine Supt....700
Comstock, Dr. Theo. B., on Arizona Mining....704
Comstock Lode, Nev., Bullion Output, Weekly.
*Comstock Lode, Nev., Discovery of. 637
Comstock Lode, Nev., Limit of....342
*Comstock Mill Ring, 211, 261, 266, 498, 525, 575, 671, *722
Comstock Mill & Mg. Co., Nev....132, 575
Comstock Mines, Nev., Draining Lower Levels of....55, 132
Comstock Pumping Assn....55
Comstock Tunnel Co....436, 438, 461, 733
Concentrated Iron Ores, Uses of....422
Concentrates in Blast Furnace....423
Concepcion Mine, San Luis Potosi....134
*Condensers, Guttman....452
Conductivity of Metals....587
Congress Mine, Ariz....731
Congress Mine, Colo....313
Conklin's Patent Mill....221
Connecticut Mining News....171, 366
Connellsville Coke....Weekly
Connemara Mine, Colo....486
Cons. Bonanza Mg. & Sm. Co., Wash. 108
Cons. Cal. & Va. Mg. Co., Nev., 15, 81, 106, 133, 173, 199, 211, 225, 228, 252, 277, 317, 342, 369, 395, 461, 462, 488, 513, 539, 575, 599, 623, 649, 685, 709
Cons. Candelaria Mg. Co., Ltd., Nev., 81, 106
Cons. Coal Mines, Ill....14
Cons. Golden Gate & Sulphuret Mg. & Del. Co., Cal....621
Cons. Mg. Co., S. Dak....343
Cons. Morning Star Mg. Co., Mont...461
Cons. New York Mg. Co., Nev....199, 369
Cons. Oil & Natural Gas Co....684
Consolidation Coal Co....689
Continental Chief Mine, Colo....537
Contract to Buy or Sell Mines in Cal., Form of....319
Contracts Open....Weekly
Convict Miners in Ga....131
Convict Miners in Tenn., 203, 225, 252, 317, 343, 370, 396, 576, 650
Conyngham Colliery, Pa....107
Cook & Sons' Mines, Pa....317
*Cook's Luminous Level....533
Cook's, Wm. W., *Corporation Problem*....262
Cooley, Thos. M....312
Cooley's Self-contained Jig....132
Cooper, Hewitt & Co....169, 572
Cooper, J. B., vs. Manuel San Pedro. 649
Cooper, J. R....250
Cooper, James B....572
Cooper, R. W....343
Coosaw Mg. Co., S. C....175
Cope, Prof. Edw. Drinker....484
Copeland, E. T....167
Copper and Cadmium, Separation of....727
Copper and Silver Smelting....74
Copper Bell Mine, Mont....132, 316, 342
Copper Deposit in N. C....539
Copper Discovery in B. C....576
Copper Discovery in Idaho....131, 197, 314
Copper Discovery in Wyo....108
Copper Exports from N. Y....Weekly
Copper Falls Mg. Co., Mich., 80, 434, 538, 574, 684
Copper Glance Mine, N. M....342
Copper Imports of Belgium....646
Copper King Mg. Co., Ariz....196
Copper, Manganese, etc., Alloys of..47, 301
Copper Market Review....Weekly
Copper Mines in Japan....219
Copper Mines in New Jersey....539
Copper Mines in Vermont....6
Copper Point Mine, N. M....343
Copper Process, Manhes....307, 610
Copper Production of Colorado....91
Copper Production of Michigan Mines....198, 315, 434, 538, 684
Copper Production of U. S....379, 381
Copper Queen Mg. Co. Ariz 79, 339, 596
Copper Smelting in Reverberatory Furnaces....74, 160
Copper Smelting, Liquid Fuel Used in. 566
Copper Smelting, Peters'....562, 634
Copper Statistics of Merton & Co....235
Copper Stocks Abroad....445, 561
Copper Wire, Strength of....127
Copperfield Mg. & Sm. Co., Vt....697
Coptis Mg. Co., Nev....461
Copying Bath, Williams....271
Cora Belle Mg. Co., Ltd., Colo....459
Corbin, H. H....620
*Corbin Locks....127, 268
Corean Miners....699
Corinth Canal....332
Cornell Mine, Nev....225, 513
Corney Phosphate Co., Fla....647
Corning Land, Ind. & Trust Co....248
*Cornu, M. and Sodium Light....75
Cornucopia Mine, Mont....172
Cornwall Furnace, Pa....247
Corona Coal Co., Ala....485
Corporation Problem....262
Corporations, Functions of....592
Correspondence....Weekly
Corrosion of Iron and Steel....46
Corrugated Iron, Gauges of....593
Cortez Mines, Ltd., Nev., 55, 132, 277, 487, 539
Costa Rican Exports....129
Costa Rican Trade....391
Coster, Geo. W., Death of....730
Couch, Thos....427
Coulter Copper Co., Mich....315
Couper, Millar & Co.'s Report on London Fertilizer Market, 135, 253, 397, 515, 625
Course of Experiments in Physical Measurements....302, 472
Course of Mineralogy for Young People....40
Court, Dr. J. on Miners' Eyesight....77
Courtis & Smith....196
Cowenhoven, M. T. & D., Co..170, 597, 708
Cowie, Geo....169
Cowles Elec. Sm. & Alum. Co., N. Y., 47, 50, 157, 432
Cowles, Eugene H., on Aluminum Alloys, &c....47
Cowles, Eugene H., on Physical Properties of Aluminum....301
Cowperthwait, J. H., on Free Silver Coinage....303
Cox Brass Mfg. Co....730
Cox, E. T., on Florida Phosphates....559
Cox, Wm., on Slide Rule....192, 311
Coxe Bros. & Co. 18, 59, 203, 347, 585, 603, 713
Coxe Bros. & Co. vs. Lehigh Valley R. R....102, 111, 491, 517, 689
Coxe, Eckley B....422, 424
Coxheath Copper Mines, N. S....428, 489
Cox's, Wm., *Polar Planimeter*....3
Craig Valley Mg. Co., Va....107
Cramp, Wm., & Sons' Ship & Engine Co., Pa....645

Crane Co. of Chicago..... 706
Crane Iron Works..... 682
Crane Mine, N. M..... 342
Crane, W. E., on Chimney Draughts 594
Crawford, Geo..... 104
Credit Industriel..... 654
Creek Mg. Claim, Mont..... 276
Crescent Iron Co., Va..... 514
Crescent Mine, B. C..... 334, 370
Crescent Mg. Co., Colo..... 647
Crescent Mg. Co., Utah..... 82, 226, 514
*Crimora Manganese Mine, Va..... 94
Criterion on Comstock Mill Swindle, 261, 266
Crocker Mg. Co., Ariz..... 222, 565
Croft Mine, N. Y..... 252
Crompton & Co., England..... 337
Crookes, W., on Metal Evaporation 360
Crosby, Capt. F. W..... 368
Crosby, F. L., on Peruvian Petroleum 472
Crossett, James L., Death of..... 103
Crossley's, Alfred, *Bricks and Brick-making*..... 262
Crossley's, Alfred, *Tables of Analyses of Clays, etc*..... 262
*Croton Magnetic Iron Mines, N. Y., *502, 680
Crown Point Incline, Nev..... 624, 685
Crown Point Mg. Claim, Colo..... 105
Crown Point Mg. Co., Nev., 15, 106, 133, 173, 225, 249, 462, 513, 539, 575, 649
Crown & Crescent Phosphate Mg. Co., Fla..... 105
Crowned King Mg. Co., Ariz., 79, 313, 731
Cryolite Discovery in Utah..... 686
Crystal Falls Mg. Dist., Mich..... 435, 598
Crystal Salt Works, N. Y..... 596
Culver, L. L..... 312
Culver Quartz Mg. Co., Mont..... 193
Cumberland Coal Co., Ky..... 648
Cumberland Coal Mines, Wash..... 463
Cumberland Mg. Claim, B. C..... 370
Cumberland Mg. & Sm. Co., Mont., 172, 368, 598, 609, 709
Cunningham, P. J., Death of..... 730
Current Prices..... Weekly
Currey, James, Death of..... 271
Curry, H. M..... 535
Cushman Iron Co., Va..... 510
Cusihuiriachic Mines, Chihuahua..... 56
Cuvier Prize of French Institute..... 725
Cyanide Process, McArthur Forrest 53, 82, 735
Cyclops Mine, Idaho..... 223

D

Dahlonega Co., Ltd., Ga..... 105
Dahmenite, New Explosive..... 311
Daily, W. H..... 12
Daisy Mine, Wash..... 278, 540
Dakota, Wyo. & Mo. River Ry..... 318
Dalton Gold Mg. & M. Co., Utah..... 107
Daly, Marcus..... 247, 361
Daly Mg. Co., Utah 82, 200, 226, 318, 370, 436, 576, 686, 734
Daly West Mg. Claims, Utah..... 370
*Dam, Beetaloo..... 47
Damon Iron Works, Mass., on Fire... 221
Danby Mg. Dist., Cal..... 313
Dandy Mg. Claim, B. C..... 15, 134, 370, 576
Dangerfield, J. H..... 341
Daniel Edwards Co..... 130
Daniell, John..... 221, 275, 598, 648, 682
Dansville Oil, Gas & Mg. Co., N. Y.... 575
Darien Gold Mg. Co., Colombia..... 344
Darlington Phosphate Co., S. C..... 107
Darwin, Chas..... 572
*David's Counting Register..... 388
Davidson, W. B. M..... 457, 502, 526, 672
Davidson, W. B. M., on Florida Phosphates..... 526, 672
Davidson, W. R. M., on Phosphatic Chalk at Taplow, England..... 502
Davies, John, Death of..... 730
Davis, Chas..... 131
Davis Coal & Coke Co., W. Va..... 108
Davis, Edward..... 391
Davis, H. G., Coal Co., W. Va..... 686
Davis, Hugh L., Death of..... 51
Davis, W. W. H..... 620
Dawes, H. F., on Chinese Silver Mining..... 355
Dawes, H. F., on Mine Leasing..... 329
Day, Wm. C., on U. S. Sandstone Industry..... 10
Dayton Coal & Iron Co. Ga..... 574
De Bardeleben Coal & Iron Co..... 103
De Beers Mines, So. Africa, 278, 330, 463, 646, 687
*De Camp, Edw. F..... 247, 305
De Dorolodot, Eugene, Death of..... 247
De La Bouglise, Geo..... 391
*De Lamar, J. R..... 129, *265, 364, 535
De Lamar Mg. Co., Ltd., Idaho, 53, 80, 105, 131, 223, 366, 393, 486, 511, 574, 597, 708, 732
De Quille, Dan, on Comstock as a Mine Supt..... 700
*De Quille, Dan, on Discovery of Comstock Lode..... 637
*De Quille, Dan, on Epoch of Silver.. 615
*De Quille, Dan, on the Old Cal. Prospector..... 567
*De Quille, Dan, on the Prospector... 528
*De Stwolinski, F. Life of..... 501
De Stwolinski, F., on Santa Fe Copper Co., N. M..... 447
Dead Broke Mine, Nev..... 512
Dead Medicine Mine, Wash..... 278
Dead River Gold Range, Mich..... 111
Deadwood Mining Stocks..... 17, 712, 736
Deadwood-Terra Mg. Co., S. Dak., 252, 317, 396, 462
Deadwood & Delaware Smelter, S. Dak..... 200, 225, 252
*Deane Mining Pumps..... 7
Deeley, Robt. & Co. vs. Delamater Iron Works..... 706
Deer Creek Coal Co., Wyo..... 134
Del Monte Mg. Co., Nev., 55, 132, 173, 199, 251, 313, 368, 539, 575, 623, 648, 684, 709
Delamater Iron Works vs. Robt. Deeley & Co..... 706
Delavan, James, Death of..... 509
Delaware Iron Co..... 457
Delaware, Lacka. & Western R. R and Haddock, Shonk & Co, 111, 137, 281, 603
Delaware Rolling Mill, N. J..... 13
Delaware & Hudson Canal Co., 85, 107, 173, 370, 396, 436, 5 3, 599
Delaware & Raritan Canal..... 737
Della Mg. Claim, B. C..... 15, 108
Della S. Mg. Co., Colo..... 314
Delta Metal and Copper Wire Strength..... 127
Demmon, D. L..... 14, 367
Democrat Mg. Claim, B. C..... 16, 134
Democrat Mg. Claim, Utah..... 226
Demurrage Charges at Buffalo..... 177
Dennis, Donald..... 247
Density of Hydrogen..... 483
Denver Gold Co., Ltd., Colo..... 130
Denver Graphite & Mica Co., Colo... 459
Denver Mining Stocks..... Weekly
Denver Natural Gas & Oil Co., Colo.. 79
Denver Society of Civil Engrs..... 12
Denver Steel Co., Colo..... 13
Depauw Plate Glass Co..... 596
Depth Improves Ore Bodies..... 310
Derbec Blue Gravel Mg. Co., Cal.... 597
Deseret Coal & Coke Co, Utah..... 134
Deseret Gold & Silver Mg. Co., Utah. 625
Desulphurizing Molten Cast Iron..... 211
Detroit City Glass Works..... 345
Detroit Copper Co., Ariz..... 196
Detroit & Lake Superior Sm. Co., Mich..... 132
Devil's Sink Hole, Texas..... 82
Dewey, E. H..... 78
Dewsnap, S. G., on Wash. Coal Fields 245
Diamond Bearing Meteorites..... 588
Diamond Discoveries in Brit. Guiana 56
Diamond Discoveries in Transvaal. 56
Diamond Fields of South Africa...330, 481
Diamond Hitch Mine, Idaho..... 732
Diamond Joe Mine, Ariz..... 393
Diamond, Large..... 566
Diamond Mine, Nev..... 395, 512, 537
Diamond Mg Co., Mont..... 394
Diamond Workers to Unite..... 484
Diamond R. Mg. Co., Mont..... 251
Diamond State Iron Co., Del..... 13, 60
Dickens-Custer Mg. Co., Ltd., Idaho, 105, 249, 275, 340, 539
Dickerson Mine, N. J..... 649, 710
Dickert, Ferd., on Utah Sulphur Deposits..... 586
Dickey, J. C..... 169
Dictator Mine, B. C..... 108
Die electrische Kraft-ubertragung und ihre Anwendung in der Praxis..... 185
*Dies, F. & H..... 270
Dillon, P. R..... 682
Dillon vs. Bayliss..... 589
Dimond, James G., Death of..... 51
D'Invilliers', E. V., Report on Pa. Geological Survey..... 472
Directory of Steam Specialties and Engineering Appliances..... 92
*Disease Due to Compressed Air...73, 119, *186
Distaff Mine, Ariz..... 393
Dividend-Paying Mines Table..... Weekly
Dividends..... Weekly
Dividends of Mg. Cos., 11, 128, 271, 390, 534, 644
Dixie Mg. Co., Utah, 107, 200, 277, 318, 576
Dixon, John E., Death of..... 196
Dixon, Jos., Crucible Co..... 247
Dobson, C. M..... 103, 312
Dodd, John S..... 391
Dodson Colliery, Pa..... 173, 252
Dolcoath Mine, England..... 4, 135
Dolomite Mine, Colo..... 683
Domestic and Foreign Coins..... Weekly
Dominion Coal Co., Manitoba..... 463
Donald's Chlorine Co., Ltd..... 94
Dorsetshire Shale Utilizer..... 426
Douglas, A. U..... 338
Douglas Mill, Nev..... 250
Douglassville Iron Co., Pa..... 13
Dove's Nest Mine, Colo..... 271
Draco, Geo. P..... 78
Dredge, James..... 78, 272, 391, 620, 706
Dreier, Ludwig..... 645
*Drill, Elec. Percussion..... *49, 720
*Drill, Moffet Portable..... 309
*Drill, Sensitive Bench..... 651
Dronier's Magnesium Lamp..... 705
Drummond, Duncan..... 223
Dry Dock Engine Works..... 730
Duluth Furnace Co..... 596
Duluth Iron & Steel Co..... 509
Duluth Mfg. Co., Minn..... 196
Duluth, Mesabi & Northern R'way, 487, 708
Duluth & Iron Range R.R..... 80, 512, 684
Dumble's, E. T., Report of Texas Geological Society..... 158
Dunbar Phosphate Co., Fla..... 486
Dunbar's, Chas. F., *Laws of U. S. Relating to Currency, Finance and Banking*..... 3, 696
Duncan, Geo., & Sons..... 130
Dunderburg Mine, Cal..... 131
Dunderburg Mine, Nev..... 368, 395
Dunham, L. A..... 247
Dunkin Mg. Co., Colo..... 14, 511
Dunn Mine, Mich..... 315, 435, 611
Dunn, W. A..... 221
Dunnington's Glassware Labels..... 50
Duquesne Steel Works, Pa..... 78
Duquesne Tube Works Co., Pa..... 169
Durant Mg. Co., Colo..... 511
Durango Mining News..... 686
Durbrow, Geo. W., on Flooding of Colorado Desert..... 9
Durfee, Wm. F..... 247
Durfee, Wm. F., on U. S. Steel Production..... 528
Dust from Roasting Furnaces..... 49, 237
Dutch Academy of Sciences, Special Prizes of..... 705
Dutch Guiana Gold Mines..... 635
Duties of Nicaragua..... 129
Duty on Coal in Vessels..... 713
Duty on Dry Colors..... 345
Duty on Natural Gas from Canada.. 85
Duvall, John, Death of..... 196
Dwight, A. S., on Coal in Blast Furnaces..... 162
Dwight, S. N..... 12
Dyer, Joseph P., Death of..... 129
Dyer Mine, Utah..... 107
*Dynamotor, Siemens-Halske..... 356
Dyrenforth, Gen..... 330

E

Eagle Bird Mine, Cal..... 197, 597
Eagle Iron & Steel Co., O..... 535
Eagle Mg. Claim, Wash..... 576
Eagle Oil Co., S. Dak..... 55
Eames, Dr. Chas. J..... 41, 78, 170, 707
Eames, Richard, Jr..... 12, 173
Earth and Mars Communicate..... 400
Earth Currents and Electric R'ways. 5
Earth, Retaining Walls for..... 3
East Jackson Mg. Co., Mich..... 80, 341
East Jersey Water Co., N. J..... 196
East Negaunee Mines, Mich..... 80
East New York Mg. Co., Mich..... 367
East Tenn., Va. & Ga. R. R vs. Sudderth..... 50
Eastern Department Co..... 428, 489
Eastern Oil Co., Pa..... 396
Ebhardt Mine, Nev..... 369
Eckhart, W. R..... 132
Eclipse Coal Co., Pa..... 650
Eclipse Mg. Co., Colo..... 53, 274
Eco Magneto Clock Co., N. Y..... 392
Eddy, Edward..... 391
Edgemoor Iron Co..... 682
Edgemore Bridge Co..... 146
Edison Concentrating Works, N. J.... 425
*Edison Elec. Illuminating Co., N. Y. 509
Edison Electric Motors..... 432
*Edison Electric Percussion Drill..... 49
Edison Electric R'way System..... 591
Edison Iron Concentration Co., Mich. 315
Edison Magnetic Separator..... 82
*Edison, Thos. A..... 252, *429, 433, 536, 733
Edwards, Alberto, Death of..... 51
Edwards, Jos. A..... 312
"Edwin H. Hartley"..... 101, 445
Egan Co., O..... 272
Egleston's, T. *Catalogue of Minerals and Synonyms*..... 210
Egypt Mine, N. C..... 462
Eiffel, M. and American Engrs..... 247
Eight-Hour Law in Neb, 175, 199, 204, 222, 436
Ekburg, B. P., on Tasmanian Silver Fields..... 472
El Carmen Mg. Co., Nuevo Leon..... 124
El Cristo Mg. Co, Colombia..... 625
El Paso Public Ore Sampling Co., Texas..... 734
El Plomo Mg. & M. Co., Ariz..... 130
Elasticity of Nickel Steel..... 270
Eldridge, Geo. H., on Florence Oil Fields, Colo..... 422
*Electric Aluminum Sm. Dynamo.... 193
*Electric Cable for Coal Mines..... 386
Electric Currents, Speed of..... 126
Electric Lamps for Miners..... 361
Electric Lamps in Frankfort Exhibition..... 311
Electric Light Plants in U. S..... 338
Electric Lights for Rome..... 613
Electric Locomotives..... 424
Electric Mfg. & Gas Engine Co..... 481
Electric Mg. Claim, Nev..... 55
Electric Motor and Its Applications. 262
Electric Motor, Edison's..... 432
Electric Motors for Collieries..... 614
*Electric Percussion Drills..... *49, 720
Electric Power Distribution..... 594
*Electric Pump, Gould..... 334
Electric R'way System, Edison..... 591
Electric Railways and Earth Currents 5
Electric Tool Sharpening Device 681
Electric Transmission Handbook.... 158
Electric Transmission of Energy.... 118
Electric Transmission of Power from Niagara Falls to Chicago..... 389
Electric Transmission of Power in France..... 185
Electric Transmission of Power in Germany..... 452
Electric Warner for Gaseous Pressure..... 246
Electrical Accumulator Co..... 130
Electrical Congress at Frankfort 196, 570
Electrical Evaporation of Metals. 360
Electrical Haulage at Abercanaid.... 337
Electrical Subways..... 157
Electrician Primers..... 158
Electricity..... 118
Electricity in Metallurgy..... 728
Electro-Deposition of Zinc and Aluminum..... 127
Electrolysis of Alloys..... 564
Electrolysis of Potassium..... 361
Electrolysis of Sulphuric Acid..... 77
Electrolytic Separation of Zinc..... 44
Electro-Magnet in Eye Surgery..... 189
Electro-Metallurgy of Zinc..... 219
*Electro-Plating Dynamo..... 100
Electro-Plating with Aluminum..... 699
Electro-Purification of Vitriol..... 168
Eleventh Census..... 610
Elgin Mine, Cal..... 131
Elgin Sm. Co., Colo..... 223, 340, 459, 573
Elizabeth Mg. Co., Mont..... 316, 435
Elk Coal & Coke Co., Pa..... 650
Elk Garden Colliery, W. Va..... 318
Elk Mg. Co., Colo..... 210
Elkhorn Mg. Co., Ltd., Mont., 15, 106, 224, 276, 342, 461, 487, 512, 598, 684, 733
Elliot Cresson Medal..... 698
Elliot's, Sir Geo., New Explosive..... 220
Elliott, H. C., on Compressed Air Power..... 357
Ellis, Wm., on Earth Currents and Electric R'ways..... 5
Ellis & Lessig's Iron Works, Pa..... 78
Elmira Mine, Idaho..... 537
Elmore Copper Depositing Process . 238
Elmore Gold Co., Ltd., Idaho..366, 511, 732
Elnora Mg. Claim, Colo..... 314
Ely Copper Mine, Vt..... 6, 697, 721
Emaus Pipe Works..... 706
Emerson Mine, Nev..... 173
Emery, Dr. Chas. E..... 235, 272
Emma Mine, Idaho..... 460
Emma Mine, Utah..... 15, 253, 277, 734
Emmen's, Stephen, *Explosives and Ordnance Material*..... 634
Emmett Cons. Mg. Co., Cal..... 58
Emmons Mg. Co., Colo..... 314
Empire Mine, Cal..... 170
Empire Zinc Co., Mo..... 316, 435
Emploi des Cables Continus pour l'Extraction dans les Mines..... 40
Endlich, F. M..... 645
Energy, Factors of..... 428
*Engine, Ammonia..... 51, *101, 445
Engine, Bidwell's Heat..... 5
*Engine, Case..... 167
*Engine Indicator, Perry's..... 46
*Engine, Lidgerwood Hoisting..... 332
*Engine, Regan Gas..... 219
*Engine, Rollason Gas..... 481
*Engine, Shortt Duplex..... 337
Engineer Force of the U. S. Navy... 361
Engineering..... 272
ENGINEERING AND MINING JOURNAL, Size of..... 719
Engineering Assn. of the South. 596, 706, 457
Engineering Tests at World's Fair 235, 272
Engineering Societies' Meetings....4, 186
Engineers, American Inst. of Mg., 4, 105, 338, 353, 422, 682
Engineers, American Society of Mech. 4, 391, 509, 594
Engineers' Club of Philadelphia..391, 457
Engineers, Denver Society of Civil.. 12
*Engineer's Wrench and Pipe Cutter 308
*Engines, Starting Gear of Gas..... 309
England at World's Fair..... 646
England's Coal Supply..... 302
English Alkali Industry..... 4
English Alkali Union, 83, 109, 135, 175, 201, 227, 253, 318, 371, 437, 483, 577, 625
English Arsenic Production..... 96
English Boycott in Calcutta..... 129
English Coal in Russia..... 263
English Coal Miners' Wages..... 56
English Coal Production..... 735
English Crown Spelter Co., Ltd., Italy..... 318
English Exports to U. S..... 728
English Investors in American Mines 117
English Iron & Steel Industry..... 222
English Mine Accidents..... 98
English Miners' Helping Belgian..... 226
English Mining News, 56, 108, 134, 253, 279, 735
English, Morse & Co..... 221
English Railroads..... 332
English Salt Deposits..... 56
English Standards of Measure..... 363
English Syndicate Buying Iron Mines in Spain..... 57
English Syndicate Buying Land in Ala..... 79
English Syndicate Buying Mines in Mont..... 106
English Syndicate Buying R'way in Colo..... 104
English Tin Plate Industry..... 391
English vs. American Courtesy..... 93
Ensley, Enoch, Death of..... 596
Enterprise Coal Co., Pa..... 200
Enterprise Mg. Co., Colo., 53, 104, 221, 222, 274, 459
Enterprise Mg. Co., Mo..... 276
*Epoch of Silver..... 615
Epsom Mg. Claim, Colo..... 170
Equitable Mg. Co., S. Dak..... 343
Erpshaw vs Martinez..... 705
Escanaba Iron Mg., Mich..... 574
Escanaba River Land Iron Co., Mich 172
Esmeralda Mine, N. M..... 710
Esperanza Mine, Sonora..... 278
Estez & Co., Colo..... 489
Ethel Mine, Colo..... 170
Etna Iron Co., Pa..... 78
Etowah Iron Co., Ga..... 708
Eureka Cons. Mg. Co., Nev., 106, 199, 224, 342, 368, 395, 466, 512, 623
Eureka Hill Mg. Co., Utah, 117, 133, 253, 396
Eureka Mine, Cal..... 170
Eureka Mine, Ind..... 708
Eureka Mine, N. C..... 173
Eureka Mine, Ore..... 82
Eureka Mg. Claim, Colo..... 104
Eureka & Excelsior G. Mg. Co., Ore. 686
Europe Mg. Claim, Utah..... 318
European Coal Production..... 671
European Firearms..... 121
European Zinc Production..... 566
Eurydice Mine, Colo..... 313, 621
Evans, Thos., Death of..... 509
Evarts, Chas. Butler, Death of..... 706
Evening Star Mg. Co, Colo..... 486
Everett & Post on Chicago Lead Market..... Weekly
Ewart Mfg. Co., Ill..... 596
Excelsior Iron Furnace, Mich..... 596
Excelsior Mine, Ore..... 82
Excelsior Mg. Claim, Mont..... 106
Excelsior Phosphate Co., Fla..... 597
Expedition to Mount St. Elias, Alaska..... 40
Exploring Alaska..... 104
Explosives and Ordnance Material.. 634
Explosives, Manufacture of..... 723
Export Notes..... 12, 129, 272, 391, 536, 646
Export Trade and Metric System..... 543
Exports and Imports of China..... 39
Exports and Imports of Italy..... 46
Exports and Imports of Japan..... 129
Exports and Imports of Gold and Silver..... 117
Exports and Imports of U. S..... 592
Exports from New York..... 129, 272
Exports of Agricultural Implements from U. S..... 12, 129
Exports of Brimstone from Sicily.... 21
Exports of Coal from U. S..... 627
Exports of Copper from N. Y..... Weekly

Exports of Costa Rica..... 129
Exports of England to U. S..... 728
Exports of Germany to U. S..... 272
Exports of Gold from U. S..19, 60, 117, 235
Exports of Iron and Steel from U. S.. 12
Exports of Mineral Oils, 82, 272, 338, 602, 711
Exports of Minerals from Spain..... 344
Exports of Quicksilver..... 282
Express Cos'. Liability..... 100
Express S. & G. Mg. Co., Colo.... 223, 314
Extension Mine, Cal..... 274
Eyesight of Miners and Safety Lamps 77

F

Fair, Albuquerque..... 462
Fair, American Inst..... 196, 458
Fair, World's, 48, 80, 104, 129, 172, 219, 225, 235, 247, 272, 338, 347, 379, 387, 391, 392, 433, 481, 535, 538, 574, 646, 706. 727
Fairfield Mg. Co., Ariz 365
Fairview Mine, Wash..... 650
Fall River Mg. Co., Colo..... 597
Fanny Rawlings Mg. Co., Colo..... 486
Farchies la Manche Colliery, Belgium..... 370
Fargis, Geo. H., Photochronograph... 360
Farish, John B 221, 338, 686
Farming in China..... 129
Farnsworth, P. T..... 318, 369, 432
Farrell, Franklin..... 312
Father De Smet Mg. Co., S. Dak..... 624
*Faucet, an Indestructible 363
Fay, J. S 198
*Fellows' Petroleum Atomizer..... 386
Felt's Comptometer..... 389
Fernow, B. E 184, 380, 423
Fernow, B. E., on Timber Tests..... 423
Ferrel, Wm., Death of 364
Ferris G. & S. Mg. & M. Co., Utah. 453
Fertilizer Market, Liverpool.....Weekly
Fertilizer Market, London, 135, 253, 397, 515, 625
Ferry, E. P 596
Festeties, Chas. Albert, Death of..... 12
Fetterman Coal Co., Wyo..... 200
Feustman, Leon P..... 391
Field, E. K..... 272
Financial Statements of Mg. Cos., 55, 316, 368, 459, 461, 561, 573, 575, 707, 709
Findlay Gas Wells, O..... 55
Finn, J. M., on Free Coinage Question 67
Finney Concentrating Process..... 432
Fire at Alabama Rolling Mills, Ala. 12
Fire at Baltimore United Oil Co., Md. 129
Fire at Beck & Co.'s Salt Works, Pa. 319
Fire at Damon Iron Works, Mass 221
Fire at Diamond State Iron Co., Del.13, 60
Fire at Gowanus Sm. Works, N. B.... 169
Fire at Groves' Fertilizing Works, Pa. 83
Fire at J. A. Roebling's Sons' Co , N. J. 103
Fire at Penna. Salt Mfg. Co., Pa..... 279
Fire at Susquehanna Chemical Co.... 651
Fire at Tonawanda I. & S. Co., N. Y. 78
Fire at Woodstock Iron Co., Ala..... 273
Fire Center Mg. Co., Mich. ..434, 460, 574
Fire Clay Deposits of Nova Scotia.... 56
Fire Clay from Mt. Savage, Md..... 681
Fire Clay Industry in Ohio..... 252
Fire Damp Explosions in Prussian Collieries..... 269
Fire in Bast Colliery, Pa..... 15
Fire in Cusihuiriachic Mines..... 56
Fire in Deer Creek Coal Mines, Wyo.. 134
Fire in Hill Farm Mine, Pa..... 133
Fire in Louisville Mine, Colo.....223, 249
Fire in McDonald, Pa..... 462
Fire in Packer Colliery, Pa..... 133
Fire in Pana Colliery, Ill..... 131
Fire in Park Place, N. Y..... 301
Fire in Republic Mine, Mich., 105, 112, 172
Fire in West Lehigh Colliery, Pa..... 734
Fire in West Stanley Colliery, Eng... 108
Firearms in Europe 121
Fire-Proof Materials 589
Fish Trap Mine, Ga..... 105
Fiske, Amos H..... 221
Fitzsimmons, H..... 391
Fitzstubbs, N..... 108
Flagstaff Mine, Utah.....174, 370
Flash Lights of Aluminum..... 330
Fleming, Stephen, Death of..... 484
Fletcher, H. E., on English Alkali Industry..... 4
Flint Mg. Co., Idaho. 223, 275, 460
Flint Spring Mine, N. C..... 369
Floersheim, Henry..... 173
Flooding of Colorado Desert, 9, 65, 93, 119, 209, 537
Florada, E 54
Florence Mine, Mont..... 435
Florence Mineral Paint & Tripoli Co., Tenn..... 107
Florence Mg. Co., Wis..... 576
Florence Oil Fields, Colo..... 422
Florida Cen'l & Peninsular Ry..... 319
Florida Hard Rock Phosphate..... 359
Florida Mining News. 14, 105, 171, 197, 223, 275, 314, 366, 393, 434, 460, 486. 537, 597, 647, 683
Florida Phosphate Lands, 14, 105, 171, 223, 275, 359, 366, 434, 460, 486, 525, 537, 586, 592, 597, 612, 642, 672, 674, 697
Florida Phosphate Law..... 40
Flower Cañon Mg. Dist., Tamaulipas. 16
Fluoride, Silver..... 47
Fluorine, Native..... 48
Fluorine, Properties of..... 631
Fluorspar Production in U. S..... 240
Flynn, James F..... 16
Fohr, Franz..... 312
Force, Wm. M., Death of..... 620
Foreign and Domestic Coins..... Weekly
Foreign Bank Statement..... Weekly
Foreign Coins, Value of..... 60
Foreign Trade of China 39
Forest City Mg. Claim, Colo..... 53
Forest Mine, O 317
Forest Mg. Claim, B. C 134
Forestry in U. S..... .....184, 620, 720
Forests and Temperature..... 76
Forfeiture of Mining Lease..... 100
Forsyth, Hyde & Co., Ill..... 432
Ft. Hall Reservation, Idaho..... 460
Ft. Payne Mg. Co., Ga..... 223
Foster, Ernest Le Neve..... 572
Foster, Geo..... 56
Fourth Mine, B. C 15
Fourth of July Mg. Co., Ariz..... 734
Four h of July Mg. Co., Wash.108, 134, 344
Fox, M. W., 81, 513, 575, 649, 652, 671, 709, 722
*Fox's Square and Mitre..... 533
Fox's, Theo., Suits Against Comstock Cos.... 733
Fraction Mg. Claim, Mont..... 106
France and American Goods..... 129
Francis, Richard, Death of..... 103
Franklin, Dr. P. A. H.....82, 391, 484
Franklin Mine, Cal..... 707
Franklin Mines, Wash..... 15
Franklin Mg. Co., Mich., 14, 16, 54, 80, 172, 315, 394, 434, 538, 684
Fraser & Chalmers 106, 312
*Frasse Lathe and Planer Tool..... 219
Frasse, Peter A., & Co 270
*Frasse Whetstone Holder..... 533
*Frazer's, Dr. Persifor, Tables for Determination of Minerals by Physical Properties..... 159
Free Coinage Mine, Idaho. 171
*Free Coinage of Silver, 1, 8, 39, 40, 41, 52, 53, 55, 66, 67. 76, 157, 158, 160, 166, 186, 237, 263, 303. 328, 329, 362, 421, 446, 447, 471, 472. 497, *498, 523, 525, 564, 587, 610, 635, 671, 672, 673, 698
Free Entry of Foreign Exhibits..... 338
Freeland Mg. Claim, Nev..... 55
Freese, E. M., & Co..... 457
Freestone Mine, Cal..... 339
Freight Ass'n. Western..... 18
Freights..... Weekly
Freights in Russia..... 134
Freights on Coal in Belgium..... 370
Freights on Coal Westward.....18, 59
French Coal and Iron Production.... 220
French Import Duties on Engines.... 272
French Mineral Springs..... 451
French Mining News, 134, 174, 318, 344, 576, 600, 686
French Phosphate Co., Fla..... 275
Frenchman Mine, Colo..... 274
Frères' Aluminum Works, France.... 705
Frewen, Moriton..... 620
Frick, H. C., Coal & Coke Co., Pa..15, 539
*Frick, Henry C., Life of..... 699
Frisbie, Eaton N..... 465
Fritsch, Bruno, Death of..... 129
Fritzgartner's, Dr. R., *Mining Code of Honduras*..... 697
Fronteriza Mg. Co., Coahuila..... 200
Fry, Carlos..... 129
Fuca Strait Mine, Wash..... 625
Fuller, S. A., Death of..... 509
Fuller's, Judge M. W., Phosphate Rock Decision..... 175
Fulton Mg. Co., B. C..... 56
*Furnace, an Assay..... 363
Furnace Dust..... 49, 237
Furnace, Rapid Annealing..... 263
Furnace Temperature..... 220
Furnacemen Strike in Pa..... 392
Furnaces in Belgium..... 334
Fuse for Bombs, Berdan's..... 75
*F. & H. Flexible Dies..... 270

G

Gadd, M., on a Mining Congress.... 263
Gadd, M., on Free Coinage..... 330
Gage Mine, Colo 53
Gagnon Mine, Mont..... 132
Gail, Bumiller & Unzicker, Ill..... 78
Galena Lyon Mine, Colo..... 275
Galena Mine, Utah..... 15
Galligher vs. Lockhart..... 568
Galt Mine, Mont..... 316
Galvanized Iron and Aluminum..... 677
Gambling in Stocks i California....3, 319
Gammell. Chas..... 53
Gap Furnace, N. Y..... 338
Gap Mg. Claim, B. C..... 134
Gardener Mine, N. S..... 278
Garfield Mine, N. M 317, 369
Garfield Mine, Wyo. 200, 370
Garnier's, J., Nickel Process.....174, 589
Garrett, Chas 391
*Gas Engine, Regan..... 219
*Gas Engine, Rollason 481
*Gas Engines, Starting Gear of 309
Gas Supply of London 727
*Gas Volumeter..... 68
Gasholders of Chloride of Calcium.... 98
Gasification of Tar 388
Gauley Mtn. Coal Co., W. Va..... 108
Gavilan Mine, Cal.....131, 301
Geikie, Archibald..... .....12, 312
Gem Mine, Utah..... 226
General Custer Mine, Colo..... 63
General Phosphate Corporation. Ont 174
General Thomas Mg. Co., Nev 81
Genesee—Vanderbilt Mg. Co., Colo.80, 131
Geneva Mine, Mich..... 435
Geological Excursion, International. 586
Geological Features of N. C..... 725
Geological Map of Mexico..... 200
Geological Society of America..... 247
Geological Society of Texas..... 158
Geological Survey of Alabama 482
Geological Survey of Arkansas..302, 328
Geological Survey of Canada..... 446
Geological Survey of Mo..... 210
Geological Survey of New Jersey.... 302
Geological Survey of Pa..... .....225, 472
Geological Survey of Wash..... 278
Geological Survey Work..... 272
Geologists' Congress..... 246, 272
Geologists, National Assn. of Govt... 312
Geology, Aids in Practical 92
"Georg", Brown Coal Wks Co., Germany..... 134
Georgia Coal Fields..... 168
Georgia Marble..... 105, 680
Georgia Mining News, 105, 131, 223, 340, 434, 460, 574, 683, 708
Georgine Mg. Co., Nev 81
German-American Petroleum Co..... 9
German Canals... 363
German Exports to U. S..... .. 272
German Firms Combine..... . . 272
German Iron and Steel Co's..... 481
German Mine Accidents..... 219
German Mg. Assn. 56
German Mining News. ...134, 200, 318, 463, 576
German Peat Industry..... 636
German Petroleum Trade..... 84
German Silver Industry of U. S..... 47
German Steel Rails..... 361
German Ultra-Marine Industry..... 77
Germania Lead Works, Utah..... 78
Gettysburg Mg. Co., Colo..... 340
Gettysburg Mg. Co., Idaho....197, 537, 648
Geyser Mg. & M. Co., Colo ... .53, 170
Giant Mine, Cal..... 274
Gibson, Geo. R., on Free Coinage..... 698
Gillinder & Sons..... 130
Gilman Mines, Wash..... 15
Gilman Mg. Co., Colo..... 197
Gilmore, Eustis, Rolling Mills..... 645
Gilpin vs. Sierra Nevada Mg. Co, Idaho..... 732
Gipsy Mine, N. M..... 369
Girard Colliery, Pa..... 277
Gladstone Mine, Cal.....274, 647
Glasgow I., C. & R'way Co., N. S.... 278
Glasgow Iron Co., Pa..... 12
Glass, Breaking Strength of..... 611
Glass Makers' Convention..... 169
Glass, New Use for Waste..... 50
Glass Workers' Assn., Amer. Flint... 51
Glass Workers' Strike in Pa..... 175
Glass Works Consolidate..... 78
Glassblowers' Convention 103
Glassware, Labeling Chemical..... 50
Glave, Lieut. E. J..... 104
Glavotti, S., Death of..... 364
Glencoe Mg. Co., Utah.....226, 277, 318
Glengarry Mine, B. C..... 108
Glenn, Wm., on Ore Sampling by Hand 195
Glenrock Coal Mines, Wyo 370
Glenwood Coal Co., Pa..... 107
Globe Sm. & Refg. Co., Colo.....14, 80
Gnesen Mine, Colo..... 170
Goad, Thos. W 313, 620
Goblet Mine, Cal..... 274
Godfrey, W. S..... 457
Godiva Mine Utah 462
*Goetz-Mitchell System of Anchoring Beams..... 619
Gogebic Development Co., Wis. 226
Golconda Gold Mg. Co., Colo. .14, 170, 314
Gold and Silver Imports and Exports. 117
*Gold and Silver Production in U. S., 65, 72, *98
Gold and Silver Production, World's, 39, 40
Gold Bank Mine, Cal..... 273
Gold Belt Mg. & M. Co., Utah..... 200
Gold Cup Mg. Co., Colo. 130, 197
Gold Deposits in Carrizo Mtns, N.M., 369
Gold Discovery in Alaska..... ... 248
Gold Discovery in Ariz..... 731
Gold Discovery in Cal..... .....274, 433
Gold Discovery in Idaho.....131, 249, 366
Gold Discovery in Ind..... 54
Gold Discovery in N. M 106, 277
Gold Discovery in Nicaragua..... .. 134
Gold Discovery in So. Africa..... 463
Gold Discovery in Wash..... .....108, 174
Gold Dollar Mg. Claim, Idaho 223
Gold Excitement in Nev... 199
Gold Exports from U. S....10, 60, 117, 235
Gold Fields of Mashonaland, S. A.... 56
Gold Fields of Mysore..... 353
Gold Finch Mg. Claim, Wash... 734
Gold Flat Mg. Co., Cal 751
Gold Group Gravel & Quartz Mg. Co., Mont..... 435
Gold Hill Dev. Co., Wyo..... 514
Gold Hill Mines, Nev 132
Gold Hill Mg. Camp, Wyo.....226, 514
Gold Hill Mg. Co., Idaho..... 80
Gold Hill Mg. & M. Co., Utah..... 200
Gold Hunter Mg. Co., Idaho 732
Gold Importation..... 279
Gold Imports of U. S..... 523
Gold in Form of Natural Sulphide.... 698
Gold King Mine, Cal..... 249
Gold King Mg. Co., N. C 173
*Gold Milling in China..... 640
Gold Milling Process, Noble..... 213
Gold Mg. Co. of Arizona..... 646
Gold Mining in Australia..... 327
Gold Mining in Dutch Guiana... 635
Gold Mining in Michigan..... 434
Gold Mining in N. C 480
Gold Nuggets Found in Brit. Guiana 56
Gold Ores of Transvaal 67
Gold Oxide..... 98
Gold Precipitation from Chloride Solutions..... 211
Gold Production in Butte, Mont..... 368
Gold Production in Transvaal..... 353
Gold Production in Venezuela 97
Gold Production in Witwatersrand, S. A..... .....235, 609
Gold Rock Mg. & M. Co., Colo..... 14, 314
Gold, Silver, Platinum & Tellurium Co., Mont..... 199
Golden Ark Mine, Colo..... 197
Golden Eagle Mine, Idaho..... 54
Golden Eagle Mg. Co., Colo..... 597
Golden Egg Mine, Colo..... 313
Golden Feather Channel, Ltd., Cal., 273, 597
Golden Fleece Mine, Colo.131, 249, 340, 393, 537
Golden Gate Alluvial Syndicate, Cal. 170, 313, 510
Golden Gate Mine, Nev..... 623
Golden Leaf, Ltd., Mont. 106, 251, 368, 487, 575, 623, 684, 733
Golden Reward Chlorination Works, S. Dak..... .....133, 200, 225, 489
Golden Rule Mine, Ariz..... 731
Good Luck Mine, N. M..... 343
Goodell, Albert I 364
Goodrich, Capt. Henry, Death of..... 364
Goods Wanted at Home and Abroad, Weekly
Gordon, C. H..... 51
Gordon Hollow Mines, Mo 316
Gordon, Strobel & Laureau, Ltd., Pa. 13
Gorham vs. Heiman 332
Goss', J. D., *History of Tariff Administration in U. S.*..... 210
Gottlieb, A..... 247
*Gould Triplex Electric Pump..... 334
Gould & Curry Mg. Co., Nev... 173, 624
Gowanus Sm. Works, N. Y., on Fire. 169
Goyer Oil Co., Ala..... 104
Graban's Aluminum Process..... 168
Gracey Woodward Iron Co., Tenn.... 650
Gragg, Capt. Isaac P 221
Grabam, J. T..... 730
Graham, J. W. on Free Coinage...237, 564
Graham, Thos., Death of..... 457
Grand Central Mine, Nev..... 106
Grand Central Silver Mines, N. M., 436, 539, 710
Grand Duke Mg. Co , Colo..... 52
Grand Prize Mg. Co., Nev..... 224, 368
Grand River Coal & Coke Co., Colo... 314
Grand Rivers Co., Ky..... 250
Grand View Mine, Colo..... 197
Granier, Dr. Emile..... 436
Granite Cutters' Strike in Conn..... 201
Granite Mountain Mg. Co., Mont., 54, 110, 251, 276, 461, 598
Granite Quarries in Iowa..... 171
Granite Quarries in Maine 80
*Granite Quarries in Mass.....171, *726
Granite Quarries in Vermont..... 56
Granite Slate Mine, Idaho..... 366
Grant Mg. & M. Co. N. M.....599, 710
Grant, J. B..... 432
Grant Locomotive Works, Ill..... ... 509
Grant Marble Quarry, Cal. 197
Granulator, the Narod..... 13
Grape Creek Coal Co., Ill.....486, 511
Graphite 121, 450
Graphite Production in U. S..... 431
Grasseli Chemical Co..... 175
Grassmann, Herr on Westphalian Coal..... 46
Graves Elevator Co..... 706
Gray Eagle Mg. Co., Cal 313, 365
Gray Rocks Mines, Mont..... 199
Great Eastern Mine, Mich..... 80
Great Eastern Quicksilver Mg. Co., Cal..... 14
Great National Sm. Co., Nuevo Leon. 226
Great Northern R. R. Co 339, 706
Great O'Sullivan Mine, Colo..... 486
Great Western Iron & Steel Works, Wash..... 221
Great Western Mine, Mich 198, 435, 487
Great Western Quicksilver Mg. Co., Cal 273, 433
Grecian Mining News..... 108, 318
Green Creek Iron & Exploration Co., Mich..... 598
Green, Prof. Traill..... 484
Green Ridge Colliery, Pa..... 55
Greenhorn Mg. Dist., Oregon..... 369
Greenland, Expedition to..... 272
Greenleaf & Forest Oil Well, Pa..... 436
Greensburg Coal Co., Pa..... 686
Greenwich Naval School..... 12
Gregg, Col. H. H.....172, 648
Gregory Mine, Colo 314
Gretchen Lead & Zinc Co., Mo 435
Grey Eagle Mg. Claim, Colo..... 105
Gribble's, Theo. G., *Preliminary Survey and Estimates*..... 185
Grier, John A., on Free Silver Coinage..... 166
Grier Manganese Lands, Tenn..... 576
Grizzly Bear Mine, B. C 134, 436, 576
Grizzly Mg. Co., Mont..... 342
Gross, R. J 338
Ground Squirrel Mine, Mont., 199, 435, 512
Grouse Mine, Idaho..... 648
Grove's Fertilizing Works, Pa..... 83
Guadalupe Mines, Nuevo Leon..... 16
Guatemalan Reciprocity with U. S. 129
Guggenheim, Benj.....169, 338
Gulf Mg. Co., Mo..... 461
Gulf Stream Phosphate Co., Fla..... 314
Gun, Haskell Multicharge..... 51
*Gun, Power of a 110-ton..... 311
Gunnell Mine and Little Josephine Mg. Co., Colo..... 14
Guns for U. S. Navy.....79, 457
Gunsight Mine, Ariz..... 248
Guston Mine, Colo..... 91
Gutta Percha..... 681
Guttenberg's, G., *Course of Mineralogy for Young People*..... 40
*Guttmann's Nitric Acid Condensers. 452

H

Haagensen, Sophus, Death of..... 730
Haddock, John C..... 252
Haddock, Shonk & Co. vs. D., L. & W. R. R.....111, 137, 281, 603
Hadfield Co., Wis..... 711
Haferkorn's, H. E., *Handy List of Technical Literature*..... 158
Hagerman, J. J..... 432
Hagey, J. E..... 105
Haggin, J. B.....172, 572
Hainsworth Steel Co., Pa.....457, 509
Halberstadt, Baird..... 169
*Hale & Norcross Mg. Co., Nev., 81, 173, 395, 462, 488, 539, 575, 624, 649, 652, 671, 687. 709, 719, *722
Half Moon Mine, Nev..... 488
Hall Bros. & Co. on Louisville Iron Market.....Weekly
*Hall, Chas. E., on Crimora Manganese Mine, Va..... 94
Hall, Josiah..... 621
Hall, Wm. H., on River Mg. in Cal... 636
Hallock, Wm..... 11
Hall's, W. E., *Car Lubrication*.....92, 236
Halogens, Separation of..... 311
Halstead Mine, Cal..... 707
Hamburg Phosphate Co., Fla..... 460
Hamburg Rolling Mills, Pa. 13
Hamilton, A. C..... 199
Hamilton Ore Co., Mich....80, 276, 511, 574, 598, 648, 708
Hamilton's *Map of Zinc Mines in Arkansas*... 3

Hammacher, Schlemmer & Co..... 620
Hammond, John Hays.....247, 620
Hampe's, W., Gold Oxide 98
Hancock, Richard..... 535
Hand Gold Mg. Co., Ga.....105, 683
Handbook of Industrial Organic Chemistry..... 446
Handy List of Technical Literature. 158
Hank R. R., Ark 339
Hanna Mg. Camp, Neb..... 710
Hannan, Geo. G., Death of..... 312
Hannssen's Weights and Measures... 127
Hanover Smelter, Utah 82
*Hanson & Van Winkle Co., N. J., *100, 645
Hard Cash Mine, Utah..... 107
Hardman Mine, N. S..... 511
Hardman vs. Putnam..... 600
Hardscrabble Mine, S. Dak..... 343
Hardware Exports of New York. 12, 129
Harker, O. H..... 16
Harney Peak Tin Mines, S. Dak., 343, 600, 711
Harper, Wm..... 535
Harriman Wrought Iron Co., Pa. 78, 119
Harrington Mark W 12
Harris, J..... 247, 313, 365
Harris, Joel Bennett, Death of..... 484
Harris, L. C., on Free Silver Coinage. 330
Harris, O. M..... 620
Harris, S. B..... 487
Harris, Wm., Death of..... 432
Harrison, Prest., on Free Coinage. ... 671
Hart Bros., Pa 462
Hartery Mg. Co., Cal..... 197
Hartshorn, Joseph 129
Hartz Mine, Tex..... 686
Harvest of 1891..... 261
Harvey Process..... 77
Haseltine, R. M.....229, 252
Haskell Multicharge Gun..... 51
Haugesund Gold Mg. Syndicate, Norway..... 56
*Haulage Systems, Rope.....164, 190
Hausmann, A., on U. S. Mining Law, 419, 421, 562
Haworth, Erasmus..... 51
Hayden Medal..... 481
Hayden & Derby, N. B..... 619
Haynald, Louis, Death of..... 51
Headley Mg. Claim, Colo..... 104
Healy, Simon..... 171
Heat, Action of, on Carbonic Oxide . 270
Heat Engine, Novel..... 5
Heat from the Moon..... 41
Heat, Mechanical Equivalent of..... 336
Heavy Chemical Market Review. Weekly
Hecksher, Richard & Sons 588
Hecla Cons. Mg. Co., Mont..... 198
Hedburg, E.....394, 509
Heerdegen Water Finder..... 51
Heil, Henry, Chemical Co..... 645
Heiman vs. Gorham..... 332
Heist, T. H..... 684
Helena Mine, Cal..... 274
Helena Mg. Claim, Wash..... 734
Helena Mining Stocks..... 17
Helena Mg. & Red. Co., Mont..... 394
Helena & Frisco Mine, B. C..... 134
Helena & Livingston Sm. & Redu. Co., Mont..... 394
Helene Mg. Claim, B. C..... 370
Hellenic Mg. Co., Greece..... 318
Helmbacher, Michael, Death of..... 221
Helmer, A. M., on Lake Superior Stocks..... Weekly
Helvetia Mine, Cal..... 274, 365, 731
Helvetia Mine, Colo 197
Hematite Iron & Mg. Co., Ga..... 460
Hemlock Mine, Mich..... 435
Henderson Mg. Claim, Colo..... 170
Henderson, Prof. C. H., on Lens Mfr. 306
*Henning, Gus C., on Low Steel Tests, 671, 678, 702, 724
Henrich, Carl..... 129
Heraeus, W. C., on Sulphuric Acid Concentration..... 191
Herberton Broken Hill Mine, Queensland..... 200
Hermit Mg. Co., S. Dak..... 55
Hermosa Mg. Claim, C. I..... 197
Hermosa Mg. Dist., N. M..... 462
Hewling's Directory of Steam Specialties and Engineering Appliances..... 92
Hiawatha Mg. Claim, Colo..... 104
Hiawatha Mg. Co., Mont..... 435
Hidalgo Mining News 174
Hidalgo Sm. & Refg. Co., Mexico 108
Higgin, Thomas, Death of..... 645
Higginbottom, J. W..... 572
Higgins, Mg. Dist., Cal..... 52
High Peak Mine, Cal..... 274
High Springs Phosphate Co., Fla., 105, 275
Highland Mine, S. Dak 174, 317
Highland Mines, Utah..... 82
Hill Farm Mine, Pa..... 133
Hillman, Gentry..... 312
Hillside Mg. Claim, Mont..... 54
Hilton, R. J..... 272
Himrod, Chas. & Co..... 392
Hine, Lucius A., on Illinois Steel Co.'s Furnace Plant 308
Hine & Robertson 526
History of Tariff Administration in U. S...... 210
History of Tin Plate Mfr..... 120
H. on Transvaal Ores..... 67
Hobart, W. S..... 710
Hobbs Glass Co., W. Va 130
*Hodges, A. D.....*71, 247, 264
Hodges, A. D., on Ore Sampling..... 264
Hodgman's *Manual of Land Surveying*..... 3
*Hofmann, Ottokar.....109, *161
Hoff Land & Mg. Co., Mo..... 241
*Hoffman Magnetic Separator..... 680
*Hoffman, W. H., on Croton Mines, N. Y..... 502
*Hoisting Engine for Quarries..... 332
*Holden Lixiviation Works, Colo., *593, 732
Holden Mines, Mo..... 198
Holden, Prof. L. E..... 364
Holidaysburg & Gap Iron Works, Pa. 103
Holland Coal Production..... 424
Holland's Petroleum Trade..... 500
Hollinsworth, H. T..... 272
Hollywood Mg. Claim, Cal..... 707
Holmes Mg. Co., Nev., 15, 81, 106, 461, 539, 599, 623, 709
Holy Moses Mg Co., Colo.....14, 170
Home Coal Co., Kans..... 367
Home Mg. Co., Mo..... 172
Homestake Mine, Colo..... 340
Homestake Mg. Co., S. Dak., 252, 317, 396
Homestead Steel Works, Pa..706, 530, 535
Homogeneity Test for Boiler Iron.... 423
Hondo Mine, Coahuila..... 200, 252
Honduras' Exhibit at the World's Fair..... 56
Honduras Mining Code 697
Honerine Mg. Co, Utah..... 107
Honnold, W. L., on Sandstone and Limestone in Mich..... 94
Hood & Co, Mo..... 198
Hooper, E 129, 368
Hoover Gold & Silver Mg. Co., Mont. 172
Hoover, James. 13
Hope Mine, Mont..... 598
Horace Greeley Mg. Claim, Mont.... 106
Hörder-Verein, Germany 481
Horn Colliery Co., Ill..... 275
Horn Silver Mg. Co., Utah, 107, 200, 318, 396, 397, 438, 464, 490, 515
Horse Shoe Bend Gold Mfg. Co., Wash. 200
Horton, L. W..... 16
Hoskins, Wm. & Co., Ill..... 484
Hot Springs Mg. Dist., B. C., 15, 56, 108, 134, 370, 576
Hotchkiss Mine, Colo..... 131
Houghton Mg. Co., Colo..... 210
Housatonic R. R. Co., Conn..... 59
Houston & Texas Cent'l R. R. vs. Lackawanna Iron & Coal Co..... 580
How to Become an Engineer..... 446
How to Make Inventions..... 524
How to Make Money Out of Inventions..... 302
Howard's, Conway R., *Transition Curve Field Book*..... 328
Howe, Brown & Co., Pa..... 432
*Howe, H. M.....*216, 263, 268, 364
*Howe, H. M., on Manganese Steel.. 216
Howe, H. M., on Steel Cast Projectiles 263
Howe-Manhattan Mine, Idaho..... 275
Howe's, H. M., *Metallurgy of Steel*.. 268
Howe's, M. A., *Retaining Walls for Earth*.....3, 118
Howes, Solomon, Death of..... 51
Hubbard, Chester D., Death of.....247, 312
Hudson, Joseph G. S..... 706
Hudson Mine, Colo.....91, 197
*Hudson River Tunnel..... 73
Humbert, August, Death of..... 338
Humboldt Oil Land Co., Cal..... 573
Humboldt Mine, Colo 197
Hungarian Metal Industry..... 611
Hungarian Mining Statistics..... 387
Hunt, A. E., on Aluminum..... 157
Hunt, A. E., on Iron and Steel Tests. 423
*Hunt, C. W., Co 9
*Hunt Coal Conveyor..... 9
Hunt, E. C 461
Hunt, Rob't W., on Evolution of American Rolling Mills..... 590, 616
*Hunt, T. Sterry, Life of..... 527
Hunter, Rob't W..... 594
Hunt's, T. Sterry, Books Translated.. 356
Hunt's, T. Sterry, *Systematic Mineralogy*..... 562
Hurd, John..... 56
Huron Bay R. R 198, 393
Huron Mg. Co., Mich., 14, 80, 315, 367, 434, 586, 490, 598
Hutchinson's, H., Antidote to Acid in Boiler Feed Water..... 263
*Hutton, Frederick R., Life of..... 589
H. W. on Richter's *Chemistry of the Carbon Compounds*..... 720
Hydrate of Alumina..... 534
Hydraulic Mining in Cal..... 573
Hydrogen, Density of 483
*Hydrogen Process, Lewes'..... 500

I

Ibex Mg. Co., Colo..... 597
Ida May Mine, Mont..... 342
Ida Mg. Co., Wis..... 174
Idaho Bedrock Flume Co., Idaho.... 197
Idaho Mine, Idaho.....170, 315, 340, 734
Idaho Mg. Co., Cal.....313, 459
Idaho Mining News, 14, 53, 80, 165, 131, 171, 197, 223, 249, 275, 314, 366, 393, 460, 486, 511, 537, 574, 597, 621, 648, 708, 732
Idaho Park Mg. Co., Colo..... 459
Idaho & Diamond B. Mg. & M. Co., Colo..... 171
Illinois Central R. R. 273
Illinois Coal Field..... 360
Illinois Mining News 14, 105, 131, 171, 250, 275, 315, 460, 486, 511, 538, 598
Illinois Steel Co...61, 103, 308 361, 432, 509, 535, 596, 620, 682, 736
Illinois & Michigan Canal 519
Import Duties of Chili 12, 391
Import Duties of France on Engines 272
Importation of Gold..... 279
Imports and Exports of China..... 39
Imports and Exports of Gold and Silver..... 117
Imports and Exports of Italy..... 46
Imports and Exports of Japan..... 129
Imports and Exports of U. S 392
Imports of Aluminum Into U. S..... 50
Imports of Bahamas from U. S..... 12
Imports of Coal Into China..... 12
Imports of Gold Into U. S 523
Imports of Mg. Machinery Into Japan 272
Imports of Nickel and Copper Into Belgium 646
Imports of Oil Into China..... 56
Incandescent Lamps as Indicators of Vibration..... 619
Independence Mg. Co., Nev 55
India, Population of..... 48
Indian Coal Mines..... 268
Indian Oil Trade..... 391
Indian Ty Mining News..171, 250, 275, 341
Indian Valley Mine, Cal 79
Indiana Block Coal Tests..... 594
Indiana-Kansas Gold Mines, Ltd., Colo..... 13
Indiana Mine, Colo..... 393
Indiana Mining News..14, 54, 171, 223, 341, 511, 574, 683, 708, 732
*Indicator, Church's Speed 120
Indicator, Perry's Steam Engine..... 46
*Indicator, Straight-Line..... 526
Industrial Notes..... Weekly
Infusorial Earth Production in U. S. 212
Ingalls Coal Co., Ind..... 341
Ingersoll Mine, Mont..... 394
Ingersoll, Robt. G..... 12
Ingersoll-Sergeant Drill Co., N. Y.... 51
Ingleside Mg. & Mfg. Co., S. C..... 107
Ingram Mine, Colo..... 79, 130, 197
*Injector, Buffalo Automatic..... 643
*Injector, Metropolitan Automatic. . 619
Inland Marine Co..... 51
Inland Salt Co., Utah 82
Inspector of Mines in Mont, Report.. 66
Inspector of Mines in Pa., Report.. 697
Institute of Mg. Engrs. American, 4, 103, 338, 353, 422, 682
Institutions of Law and Forms..... 328
International Congress at Frankfurt 196, 570
International Congress of Geologists 246, 272
International Convention of Zinc Producers..... 363
International Geological Excursion.. 586
International Meteorological Congress in Munich..... 247
Interstate Commerce Law..... 85
Interstate Inv. & Dev. Co., Tenn..... 510
Interstate Mg. Co., Mo..... 250
Introduction to the Study of Metallurgy..... 40
Investigator on Metallurgy of Antimony..... 119
Iodine Solution Standardized for Determining Sulphur in Steel..... 640
Iowa Central R. R..... 18
Iowa Hill Mine, Colo 314
Iowa Mine, Colo..... 170
Iowa Mg. Co., Ore..... 107
Iowa Mining News.....171, 341, 598
Irelan, Wm., Jr..... 247
Iron and Carbonic Oxide.....70, 618
Iron and Nickel Compounds..... 128
Iron and Nitric Acid. 168
Iron and Silica..... 304
Iron and Steel Assn., American ..92, 101
*Iron and Steel, Carbon in *68, 235
Iron and Steel, Corrosion of 46
Iron and Steel Exports of U. S..... 12
Iron and Steel Industry of England.. 222
Iron and Steel Inst. Journal..... 380
*Iron and Steel Mfrd. in Continuous Sheets Direct from Fluid Metal..... 473
Iron and Steel, New Fluid for Coloring 638
Iron and Steel Production in U. S..92, 101, 528
Iron and Steel Tests..... 423
Iron and Steel Workers, Amal. Assn. of...13, 19, 20, 86 103, 129, 130, 169, 247, 273, 364, 615
Iron Belt Mine, Wis..... 650
Iron Carbon Monoxide..... 618
Iron Castings Cement 47
Iron Chief Mine, Mont..... .....159, 251
Iron County Mg. Co, Mich..... 435
Iron Hill Mg. Co., S. Dak., 82, 174, 313, 462, 488, 624
Iron Industry of New England..... 209
Iron, Low Phosphorus..... 231
Iron Market Review, Chicago, Louisville, New York, Philadelphia, Pittsburg..... Weekly
Iron Market Review, Cleveland, 205, 374, 411, 605
Iron Market Situation..... 118
Iron Mountain Extension Mg. Co., Mont..... 15
Iron Mountain Mine, Cal..... 365
Iron Mountain Mg. Co., Mont.....15, 81
Iron, Native of Terrestrial Origin.... 240
Iron Ore at Lake Erie Ports..... 714
Iron Ore Deposits in Lower Cal..... 735
Iron Ore Deposits in N. M..... 734
Iron Ore Discovery in Cal..... 274
Iron Ore Discovery in Minn..... 460
Iron Ore Discovery in Mont. 54
Iron Ore Discovery in N. C..... 513
Iron Ore Discovery in N. S..... 56
Iron Ore Discovery in Pa..... 225
Iron Ores of Minnesota..... 3
Iron Production in France..... 220
Iron Production in U. S....92, 101, 445, 454
Iron Rates Advanced..... 230
Iron Rendered Rust-Proof 588
Iron Rust; How to Remove..... 337
Iron Silver Mg. Co., Colo..... 249, 459
Iron Soldered with Nickel 290
Iron Star Mg. Co. Mich..... 487
Iron Trade Situation..... 585
Iron Workers' Wages in Pa..... 236
Iron Workers' Strike.....13, 19, 20, 86
Iron & Land Co., Minn..... 574
Ironclad Gold & Silver Mg. Co., Colo. 366, 486
Irondale Glass Works, N. Y..... 485
Iroquoise Furnace, Ill..... 257
Iroquoise Mg. Claim, B. C.....16, 134
Irrigation Work of U. S. Geological Survey..... 725
Irus Coy Mine, Colo..... 53
Irwin Plate Glass Works, Pa..... 130
Italian American Exhibition..... 272
Italian Lignite.....11, 70
Italian Mineral Production..... 46
Italian Mining News..... 318
Italy and American Goods..... 129
Ivanhoe Mine, Wash.....540 650
Ivanhoe Mg. Claim, B. C..... 134
Ivory, Artificial..... 334
I. W. T. on Ely Mine, Vt..... 721

J

Jackson, A. B..... 199
Jackson, Capt. Geo. A. 78
Jackson, D. C..... 103
Jackson Gate Mine, Cal..... 459
Jackson Iron Co., Mich..... 574
Jackson, M, A..... 108
Jackson, Wm. H., Death of..... 682
Jagnaux's, Raval. *Aide-Memoire du Chemiste*..... 66
Jahrbuch der Kaiserlich-Koniglichen Geologischen Reichsanstalt..... 210
James, David 78
*James Puddling Furnace 481
James, Samuel..... 78
Jaminet, Dr, on Compressed Air..... 119
Janin, Louis, on Electricity in Metallurgy..... 728
Janin, Louis, on Why Mg. Ventures Fail in So. America..... 644
Janin's Process at Comstock Mines 599, 685
Japanese Copper Mines..... 219
Japanese Exhibit at World's Fair.... 391
Japanese Imports and Exports..... 129
Japanese Imports of Mg. Machinery. 272
Japanese Mining News.....174, 600
Jaques, W. H., *Bethlehem Armor, etc.* 236
Jasper Iron Co., Tenn..... 273
Jay Bird Mine, Colo..... 275
Jay Gould Mine, Colo..... 732
Jay Gould Mine, Ore..... 200
Jay Hawk & Lone Pine Cons. Mg. Co. Ltd. Mont.....368, 574
J. C. Johnson Mine, Colo.....170, 314
Jeanette Mg. Co., B. C..... 56
Jeannette Mg. Co., Idaho..... 314
Jeans, J. S., on U. S. Pig Iron Production..... 471
Jeffers, L. G., on Free Coinage..... 447
Jefferson Gold Quartz Mg. Co., Cal.. 647
Jeffrey Mg. Co., O. 221, 572, 596, 645
Jenifer Iron Co..... 103
Jenkins, H. C., on Electrolysis of Alloys..... 564
Jenkins, R. C..... 247
Jenney, Prof. W. P..... .....15, 172, 316
Jennings, Richard, Death of..... 364
Jennings, Samuel..... 275
Jermyn No. 1 Colliery, Pa..... 107
Jet Propulsion..... 211
Jim Blaine Mine, Idaho.....80, 223, 315
Jim Mine, N. C..... 436
J. J. Mg. Claim, Mont..... 172
Johannesburg Mining Exhibit..... 463
John Arthur Mine, Wash.....436, 540, 734
John B. Sherman Mine, Colo..... 53
John Scott Medal..... 619
John Wahl Commission Co. on St. Louis Lead Market..... Weekly
Johns, H. W., Mfg. Co., N. Y.....51, 103
Johns, Wm..... 395
Johnson, F. L..... 54
*Johnson, G. P., on Longdale Mine, Va. 124
Johnson, S. E..... 648
Joliet Sheet Rolling Mill Co., Ill..... 535
Joly, A., and Osmiamic Acid..... 128
Joly's Meldometer..... 7
Jones Bros..... 131
Jones, John H., on Southern Coal Fields..... 167
Jones, S. B..... 709
Jones, W. T..... 170
Jones & Loughlin, Pa. 133, 572, 630
Jordan Mines, Utah..... 82
Jordan, S., on *Metallurgy of Steel*... 268
Joseph Glasson Mg. Claim, Cal..... 131
Josephine Mine, Mont..... 342
Journal of Iron and Steel Institute.. 380
Judd, Capt Henry..... 369
Julia Cons Mg. Co, Nev..... 224
Julien Electric Co..... 130
Jumbo Mg. Claim, Colo..... 104
Jumbo Mg. Claim, Idaho..... 223
Junction Iron & Steel Co., O. 78, 103
Justin Mg. Co., Colo..... 274
Justin Mg. Co., Nev.....15, 252, 539

K

Kakina Iron Co, Minn..... 733
Kansas Mining News. 14, 54, 80, 131, 198, 341, 366, 393, 434, 538, 574, 598, 621, 648, 683, 708, 733
Kaolin Discovered in Ill..... 538
Kapp's, G., *Electric Transmission of Energy*..... 118
Kaslo Creek Copper Discoveries, B.C. 576
Kearsarge Mg. Co., Mich., 54, 172, 198, 341, 434, 538, 684
*Keartland's Tuyere Iron..... 729
Keating, R. P 710
Keith & Perry Coal Mg. Co., Mo. . 460
Keilar Bros..... . 620
Keller, Richard 12
Keller, Wm. H 12, 364
Kelley's Island C. & C. Co., W. Va.... 318
Kelly, Wm..... 105
*Kelly, Wm., on Sinking in Quicksands in Mich..... 568
Kemble Iron Co., Pa..... 78
Kennedy M. & Mg. Co., Cal. ..79, 365, 707
*Kenneily's Patent Protractor..... 126
Kent Iron Co..... 706
Kent, Wm..... 118, 272
Kent, Wm., on Coal Tests...430, *450, 476, *504
Kent, Wm., on Neville Direct Process..... 119
Kent, Wm., on Pawtucket Pumping Engine..... 595
Kentuck Cons. Mg. Co., Nev 55, 106, 133, 225, 277, 369
Kentucky Gold Fields..... 167
Kentucky Mining News.. 80, 171, 198, 250, 486, 648, 684
Kenyon, Enoch..... 312

Kerby, Patrick, Death of ... 432
Kettle Falls Mg. & Dev. Co., Wash.. 278
Kettlewell, Saml. H., Death of ... 12
Keuffel & Esser Co., N. Y. ... 311, 509
Kewaunee, Green Bay & West. R. R. 198
Keweenaw Redstone Co., Mich. ... 105, 394
Keyes Mg. Co., Nev. ... 709
Keystone Bridge Co. vs. Phœnix Bridge Co ... 484
Keystone Chlor. Works, S. Dak. ... 50, 174
Keystone Coal Co., Pa ... 173
Keystone Electric Co., Pa ... 51
Keystone Manganese & Iron Co., Ark. 459
Keystone Mine, Cal. ... 359
Keystone Mine, Colo. ... 708
Keystone Mine, Idaho ... 80
Keystone Mine, Utah. ... 15, 82, 318, 462
Kimball, W. B., Death of ... 457
Kimberly Mine, So. Africa ... 278, 330, 463
King, Austin ... 129
King, Austin, on Coal Mine Accidents, 122
King, Dr. G. W ... 535
King Flume Co., Mont. ... 81
King, Francis ... 12
King Glass Co., Pa ... 130
King Iron Bridge & Mfg. Co., O. ... 169
King, W. R., on Defense of New York ... 354
*King's Litter for Use in Mines ... 571
Kingston Coal Co., Pa. ... 82, 734
Kinkead Mill, Nev. ... 15
Kirby, Daniel ... 78
Kirchhoff, Chas., on U. S. Copper Production ... 379, 381
Kirchhoff, Chas, on U. S. Lead & Zinc Industry ... 39, 45
Kirkaldy's, Wm. G., Testing System.. 185
Kirk's, Arthur, *Quarryman and Contractor's Guide* ... 697
Kisterbock, Josiah, Death of ... 123
Kitchen Bell Mg. Claim, Colo ... 104
Klaffkey vs. National Mg. Co., Mont. 132
Klein vs. Power ... 480
Knickerbocker Colliery, Pa. ... 55
Knickerbocker Mine, Idaho ... 537, 648
Knickerbocker Mine, Nev ... 709
*Knife and Scissors Grinder ... 388
Knight, J. B. ... 596, 622
Knights of Labor ... 235
Knoble Mg. Co., Mo. ... 80
Knott Mine, Idaho ... 80
Knox, John Jay, on Free Silver Coinage ... 166
Knudson & Paterson Co. ... 109
Kohinoor Colliery, Pa. ... 55
Kokomo Dressing Wks., Colo. ... 486
Kootenai-Bonanza Mg. Co., B. C., 16, 108, 370
Kootenai Chief Mine, B. C. ... 15
Kootenai Mg. & Sm. Co., B. C. ... 576
Kosman's Separation of Zinc ... 44
Krause, O. K. ... 706
Krause, O. K., on Ely Mine, Vt. ... 697
Krao Mine, B. C ... 15, 134, 576
Krapp, F., on Ultramarine ... 77
Kroll vs. Wesling ... 100
Kunz, Geo. F ... 461

L

La Belle Mg. Claim, Utah ... 370
La Blanca Mine, Nuevo Leon ... 16
La Gloria Mine, Chihuahua ... 108, 200
La Mula Lead Dist., Chihuahua ... 344
La Panta Mg. Co., Nev. ... 15, 539
La Pierre Phosphate & Mfg. Co., Fla. 171
La Plata Mines, Ltd., Colo., 130, 170, 249, 365, 486, 510, 621, 731
La Plata Mg. Dist., Utah ... 306
La Plata Mg. Dist., Wyo. ... 463
La Plata & Sundown Cons. Mg. Co., Utah ... 396, 462
La Sell, Ill., vs. Union Coal Co. ... 168
Labeling Chemical Glassware ... 50
Labor Imported for World's Fair ... 129
Labor in the Northwest ... 235
Lackawanna Coal Co., Ltd ... 513
Lackawanna Iron & Coal Co ... 3-2, 580
Lackawanna Iron & Steel Co. ... 138, 221
Lackawanna Mine, Colo. ... 314
Lackawanna vs. Mammoth Mg. Co ... 197
Lackey, A. ... 106
Lacoochee Phosphate Co., Fla. ... 223
Lady Alice Mine, Colo ... 459
Lady Bedford Mine, Cal. ... 573
Lady Ensley C. I. & R. R. Co., Ala.. 432
Lady Murphy Mg. Co., Colo. ... 11, 79
Lady Washington Cons. Mg. Co., Nev. 173
Laflin Coal Co. ... 173
Laflin & Rand Powder Co. ... 129
Lake Angeline Mg. Co., Mich ... 315
Lake Cacha Mine, N. S. ... 541
Lake Erie Rolling Mill Co., O. ... 13
Lake Superior Coal Trade ... 439
Lake Superior Iron Co., Mich.. 198, 460, 487, 648
Lake Superior Iron, Gold and Silver Stocks ... Weekly
Lake Superior Ore Shipments, 172, 224, 250, 339, 365, 393, 433, 458, 485, 510, 574, 646
Lake Superior Sm. Co., Mich., 54, 132, 250
Lake View Mg. Claim, Wash. ... 731
Lake View Mg Co., N. S. ... 56
Lamartine Mine, Colo ... 223
Lamb, Thos., Death of ... 169
Lamp, Dronier's Magnesium ... 705
Lamp, Schnelke's ... 127
Lamps and Miners' Eyesight ... 77
Lamps for Miners, Electric ... 361
Lamps, Safety ... 212
*Lanchester's, F. W., Self Starter for Gas Engines ... 309
Land Grant Case, Northern Pacific ... 445
Land Surveying Manual ... 3
Lane, D. C. ... 170
Lang, Herbert ... 54
Lang, Herbert, on Matte Smelting for Copper and Silver ... 160
Lang, Herbert, on the Literature of Matte Smelting ... 721
Lang Syne Mine, New ... 81
*Langdon Tuyere ... 536
Lange's Zinc Process ... 44, 219
Langley, J. W., on Methods of Analysis ... 361
Langley's, J. W., Aluminum Alloy ... 261
Lanscliffe Coal Co., Pa. ... 107
Lansonham Oil Co., Pa. ... 686
Lartique Single Rail R'way ... 185
Las Cabessas Mine, France ... 576
*Last Chance Mine, Idaho. *49, 223, 315, 366, 538
Last Chance Mine, Utah ... 15
Last Chance Mg. Co., Colo ... 80
Last Chance Mg. Co., N. M. ... 133, 624, 686
*Lathe and Planer Tool, Frasse ... 219
*Lathe Dog, Bonney ... 614
*Lathe, Prentice Engine ... 705
Laughlin, Alex., Co., Pa. ... 572
Laughlin & Junction Steel Co., O. ... 389
Laura Mg. Claim, Colo ... 104
Lawall, Elmer H. ... 1, 133, 523
Lawrence, C. H. ... 133
Lawrence Cement Co., N. B ... 484
Lawrence Co., Oil, Gas & Mineral Co., Ala ... 104
Laws of U. S. Relating to Currency, Finance and Banking. ... 3, 696
Lawson Mine, N. S. ... 278
Lawton's, Chas. D., Report on Mich. Mines ... 40
Layton Mine, Colo ... 130
Le Roy Mg & Sm. Co., B. C. ... 174, 735
Lead Blast Furnace Using Coal ... 100, 162
Lead City G. & S. Mg. Co., S., Dak ... 225
Lead Deposits in Chihuahua ... 344
Lead Discovered in Ill ... 131
Lead Industry of Swaledale, England 253
Lead Industry of U. S ... 39, 45
Lead King Mg. Co., Colo ... 249, 314
Lead Market Review, Chicago, New York, St. Louis ... Weekly
Lead Mines of Bingham, Utah ... 65, 81
Lead Ores, Mexican, 53, 65, 91, 226, 327, 344
Lead Pipes Destroyed by Worms ... 383
Lead Smelter at Revelstoke, B. C. ... 370
Lead Smelting in Colo ... 183
Lead Smelting in Mexico ... 327, 381
Lead Smelters' Strike in Neb., 178, 199, 201, 222, 248
Lead Tariff Amended ... 138
Lead Trust ... 130, 248, 322, 518
Lead & Zinc Assn. of Mo. & Kan. ... 224
Leadville Cons. Mg. Co., Colo., 274, 486, 489, 601
Leadville Ore Deposits ... 209
Leary's Raft ... 83
Leavenworth Coal Mg. Co., Kan. ... 538
Lebanon Iron Co., Pa. ... 13, 247
Lebanon Rolling Mill, Pa. ... 221
Leblanc Process in England ... 4
Lederer, A., on Blast Furnace Temperature ... 220
Lee, Geo. B ... 196
Lee Peck Mine, Mich. ... 51, 598
Leech, Edward O. ... 570
Leech, M. T ... 80
Leechburg & Westmoreland C. & C. Co., Pa ... 15
Leech's, E. O., *Mint Report* ... 697
Leffel, James & Co., O. ... 535
Legal Tender Cons. Mg. Co., Colo. ... 393
Legal Tender Mine, Mont. ... 199
Lehigh Iron Co., Pa. ... 273
Lehigh Valley Coal Co. ... 18, 133, 277
Lehigh Valley R. R. Co., 18, 59, 78, 102, 111, 491, 517, 539, 689
Lehigh & Delaware Canal ... 653
Lehigh & Wilkesbarre Coal Co., Pa., 1, 18, 133, 173, 396, 462, 488, 513, 523
Lehman, Theo. ... 315
Leland Stanford Jr. University of Cal. 103
Lenses for Spectacles ... 306
Leo Mine, Colo ... 274, 459, 574
Leonard, H. Ward Co., 221, 312, 389, 432, 509, 572, 682
Leon's Vitriol Process ... 168
Lepierre's, Chas., Sulphur Experiments ... 193
Lesley, J. P ... 225
Lesley's, J. P., Report on Pa. Geological Survey ... 472
*Level and Plumb, Pocket ... 271
*Level, Cook's Luminous ... 533
*Level, Tower Pocket ... 388
*Lewes' Hydrogen Production ... 500
*Lewes, Frof. Vivian B., on Spontaneous Ignition of Coal ... 306
Lewis, Albert ... 424
Lewis, Capt. Wm. ... 173
Lewis Fdy. & Machine Co., Ltd., Pa. 12
Lewis', J. M., Annual Report ... 277
Lewis, James E., Death of ... 535
Lewis, James & Sons ... 601
*Lewisohn, Leonard ... 78, *383
Lewisohns and Huron Mg. Co ... 80
Lexington Mine, Ariz. ... 734
Lexington Mine, Mont. ... 199, 487, 646
Liability of Express Cos ... 100
Liability for Improper Car Loading.. 50
Liberty Mfg. Co., Ala ... 509
Lick, John H., Death of ... 509
*Lidgerwood Hoisting Engine ... 332
*Lidgerwood Mfg. Co *332, 392, *425, 620
*Lidgerwood Suspension Cableway.. 425
*Light from Burning Sodium ... 75
Light, Monochromatic ... 675
Ligh's Rolling Mills, Pa. ... 13, 221, 247
Lignite, Italian ... 11, 70
Lime Market Review, 21, 57, 83, 109, 135, 175, 201, 227, 253
Limestone and Sandstone in Mich. ... 94
Limestone Industry in Ohio ... 252
Lincoln Bessemer Iron Ore Co., N. J. 369
Lincoln Mine, Mich. ... 435
Lincoln Mine, Nev ... 132
Lindner Phosphate Co., Florida ... 597
Linton Gas Well, Pa. ... 133
Lion Mg. Co., Mont ... 199, 461
Lippman, Joseph ... 462
*Liquids, Specific Gravity of ... 701
Lissak, J. ... 712
Liston, J ... 313
Liter vs. Ozokerite Mg. Co. ... 592
*Litter for Use in Mines ... 571
Little Albert Mine, Colo ... 17, 58, 228
Little Annie Mg. Co., Colo. ... 80, 708
Little Boulder Mine, Mont. ... 172
Little Chief Mg. Co., Colo. ... 197, 537
Little Chop Mine, Idaho ... 538
Little Ellen Mg. Claim, Colo ... 511
Little Gertrude Mg. Claim, Colo. ... 314
Little Giant Mine, Idaho ... 80
*"Little Joker" ... 719, *722
Little Josephine Mg. Co. vs. Gunnell Mine, Colo ... 14
Little Leadville Mg. Claim, Mont. ... 54
Little Mina Mine, Mont. ... 55, 199
Little Nellie Mg. Co., Mo. 132, 224, 461, 512
Little Pittsburg Mine, Cal. ... 301
Little Prince Mg. Claim, Colo ... 314
Little Rooster Mg. Claim, Colo. ... 105
Little Rule Mg. Co., Colo. ... 131, 340, 537
Livermore, Col. T. L. ... 196
Liverpool Chemical Market, 21, 57, 135, 201, 279, 319, 437
Liverpool Fertilizer Market ... Weekly
Livingston Coke & Coal Co., Mont. ... 394
Livingston Fire Clay Co., Mont. ... 15
Lizzie L. Mine, Nev. ... 512
Llano Iron Ore Fields, Tex. ... 489
Lochart vs. Gallagher ... 568
Lockheart Mine, Ga. ... 105
Lockridge Furnace, Pa. ... 12
*Locks, Corbin ... 127, 268
Locomotive Mg. Co., Ariz. ... 365
Locomotives, Electric ... 424
L. on Dead River Gold Range, Mich.. 119
London Fertilizer Market, 135, 253, 397, 515, 625
London Gas Supply ... 727
London Mg. Co., Colo. ... 340, 708
London Stock Quotations ... Weekly
London & Pacific Petroleum Co., Peru ... 121, 134
Londonderry Iron Mills, N. S. ... 278
*Longdale Iron Co.'s Mines, Va. ... 124
Lone Pine Mines, Mont. ... 196
Lone Star Cement Works, Texas. ... 107
Longmaid, J. Henry ... 364
Lookout Mg. Claim, B. C. ... 134
Lord Byron Mine, Nev ... 368
Lorettie Mg. Claim, Utah ... 200
Lottie Mg. Co., Mich. ... 435
*Louis, Henry, on Chinese Gold Milling ... 640
Louisiana Mining News ... 486
Louisville Iron Market Review .. Weekly
Louisville Mine, Colo. ... 223, 249, 274
Lounsbery, H. R. ... 202, 438, 712
Lovegrove & Co., Pa. ... 51
Lovejoy, E. P., Death of ... 272
*Lovett-Finney Magnetic Separator.. 588
*Low Steel in Railway Bridges, 671, *678, *702, 724
Lower California Mining News, 134, 226, 600, 735
*Lowry Rock and Ore Breaker ... 638
Loyal Hanna Coal Co., Pa. ... 686
Lubricating Oils ... 102, 532
Luck in Mining ... 301
Luckie Syndicate, Brit. Guiana ... 56
Lucky Bill Mg. Co., Utah ... 226
Lucky Cuss Mine, Ariz. ... 313
Lucky Friday Mine Idaho ... 732
Lucky Six Mg. Co., Wyo ... 226, 540
Ludington Mine, Mich. ... 105
*Ludlow Coal Bucket ... 11
*Ludlow, Edwin, on Mg. Accounts.. 566
Ludlow Valve Mfg. Co. ... 247
Lukens Iron & Steel Co., Pa. ... 392, 509
Lum Burge Mine, Idaho ... 366
Lumber Dealers' Assn ... 57
Lumber Handlers' Strike in N. B., 21, 57, 83, 109
Lumber Market Review ... 83, 109, 135
Lumberman's Mg. Co., Mich. ... 105, 315
Luminous Level Co., N. B ... 533
Luna Mg Claim, Mont ... 106
Lumbolhm, Hjalmar ... 682
Lunge, G., on Analysis of Sodium Aluminate ... 501
*Lunge, G., on Carbon in Iron and Steel ... 68, 235
Lunge, G., on Sulphuric Acid Mfr. .. 380
Lyle's Mine Jumped by Mexicans 273
Lyman, D. B. ... 106
Lyon vs. Stewart, Utah ... 277
Lyon, Z. B., on Basic Steel Mfr. ... 303
*Lyon, Z. B., on Steel Tired vs. Cast Iron Wheels ... 93

M

Mabel Mg. Co., Ala. ... 459
MacDonald, T. H. ... 570
MacIvor's White Lead Process ... 681
Macato Gold Mg. Co., Cal. ... 222
Machinery and Supplies Wanted. Weekly
Machinery Exports of N. Y. ... 12, 129
Mackay, Col. H. D. ... 108
Mackay, John W., 106, 196, 199, 228, 317, 391, 688
Macquet, Jerard ... 620, 686
Madeline Mine, Colo. ... 53, 486
Madonna Mine, Colo ... 53
Maestro Mine, B. C. ... 15, 134
Magna Vista Mine, Colo. ... 314
Magnesia Cement, New ... 681
Magnesia, Hard Burn Converted Into Soft Burn ... 453
Magnesite Mine in Cal ... 433
Magnesium Lamp ... 705
*Magnetic Iron Ore at Weldon, N. J. 588
Magnetic Iron Ores in N. J. ... 588, 733
Magnetic Iron & Steel Ore Co., S. C.. 343
Magnetic Ore Concentrating Co., Minn ... 368
Magnetic Separator, Edison ... 82
Magnetite in Tailings ... 423
*Magnolia Anti-Friction Metal Co., N. Y ... *75, 509
Magnolia Mg. Claim, Colo. ... 314
Magnolia Phosphate Co., S. C. ... 107
Mahala Mine, Colo ... 274, 511, 37
Mahoning Valley C. & C. Co., O ... 599
Mahoning Valley Iron Co., O. ... 312
Maid of Erin Silver Mines, Ltd., Colo., 53, 117, 249, 274, 314, 366, 393, 433, 511, 537, 574, 621, 647, 683, 732
Maid of Monterey Mine, N. M. ... 395
Main, C. T., on Value of Water Power ... 594
Maine Mining News ... 80, 223, 275, 648
Major Budd Mg. Claim, Mont. ... 316
Malaga Gold Mine, N. S. ... 278, 463
Malago Colliery, England ... 279
Malcolmson, Alfred S. ... 21
Maletra Chemical Co., France ... 385
Malhala Mine, Colo. ... 459
*Malleable Iron Mfred. in Continuous Sheets Direct from Fluid Metal 473
Mallory, Wm. M., Death of ... 272
Mamie Richmond Mine, N. M. ... 369
Mammoth Gold Mine, Ltd., Ariz., 104, 248, 339, 365, 393, 485, 596, 731
Mammoth Mine, Idaho ... 131
Mammoth Mg. Claim, Wash. ... 734
Mammoth Mg. Co., Colo. ... 314, 621
Mammoth Mg. Co., N. M. ... 173, 599
Mammoth Mg. Co., Utah ... 82, 318, 344
Mammoth Vein Coal Co, Pa. ... 575
Mammoth vs. Lackawanna Mg. Co.. 197
Manchester Ship Canal ... 269
Manganese and Zinc Separation ... 386
Manganese, Copper &c., Alloys of.. 47, 301
Manganese Deposits in France ... 576
Manganese Deposits in North America 126
Manganese Deposits in Nova Scotia.. 278
Manganese Deposits in Tenn. ... 576
*Manganese Ore of Crimora, Va. ... 94
*Manganese Steel ... 216
Manganese Sulphide as a Pigment... 384
Manhattan Mine, Mo. ... 132, 224
Manhattan Mg. & Red. Co., Nev. 316, 369
*Manhes' Copper Process ... *307, 610
Manitoba Mining News ... 108, 463
Mannheim Slide Rule ... 311
Manning Mine, Va. ... 108
Mansfield Lode, Mont. ... 342
Mansfield Mg. Co., Mich. ... 315, 435
Mansfield Tin Mg. & M. Co., S. Dak.. 56
Manual of Land Surveying ... 3
Manual of the Steam Engine ... 262, 354
Manufacturing Chemists' Assn ... 600
Map of Mexico ... 200
Map of Pittsburg Coal Fields ... 252
Map of Red Mountain, etc ... 328
Map of Zinc Mines in Arkansas ... 3
Marble, Imitation ... 591
Marble in Cal. ... 197
Marble in Colo. ... 104
Marble in Ga. ... 105, 680
Marble in N. C. ... 50
Marble in Vt. ... 489
*Marble, Strength of ... 453
Marchlewski, Leo ... 68
Marion Natural Gas Co., O. ... 106
Marmet Mg. Co., W. Va. ... 344
Marquette City & Presque Isle Ry. Co., Mich ... 51
Mars and the Earth Communicate ... 100
Marshall Coal Co., Colo. ... 229
Martin, C. C. ... 12
*Martin Steel Used for Bridges, 671, *678, *702, 721
Martin vs. Thomas Slag ... 450
Martinez vs. Ernshaw ... 705
Martin's, T. C., *Electric Motor, etc* ... 262
Mary Furnace, O. ... 204
Mary Lee Coal & R. R. Co. ... 339, 485, 573
Mary Mg. Claim, Utah ... 200
Mary Murphy Mg. Co., Colo ... 14
Maryland Phosphate Co., Fla ... 597
Maryland Steel Co., Md., 13, 169, 221, 374, 645, 682, 706
Mashonaland Gold Fields, S. A. ... 56
Massillon Rolling Mill, O ... 13
Mason, C. P. ... 129
Mason Co. Oil & Gas Co., W. Va. ... 226
Mason Regulator Co., Mass. ... 535
Mason & Barry ... 171, 576
Mason & Smith and Quincy Mg. Co., Mich ... 14
Massachusetts Mg. Co., Utah ... 82, 318
Massachusetts Mining News ... 171
*Masseney, J., on Sulphur in Iron... 592
Mastodon Mine, Mich. ... 80, 435, 460, 684
Mastodon Tusk Found in Oregon ... 167
Matte Smelting ... 74, 160, 721
Matthiessen, F. W. ... 509
Maud R. Mg. Claim, Nev. ... 55
Maw, M. H. ... 272
Mayer's, Chas., *Institutions of Laws and Forms, etc* ... 338
Mayflower Gravel Mg. Co., Cal. ... 365
Mayflower Mine, Idaho ... 80
Mayflower Mine, S. Dak ... 82
Mayflower Mine, Utah ... 277
Mayflower Mg. Claim, Cal. ... 196
May-Mazeppa Cons. Mg. & M. Co. Colo. 130, 197, 249, 433
McArthur-Forrest Cyanide Process, 53, 82, 735
*McClave Grates ... 269
McClelland, T. A. ... 132
McComber Mine, Minn. ... 172
McCormick Test Well, Pa ... 225
McCosh Iron & Steel Co., Iowa ... 484
McCranor Mines, Mont ... 81
McCutchen, James ... 272
McDonald Oil Field, Pa. 396, 488, 539. 575, 602
McDonald, Pa., on Fire ... 432
McKean, E., on China's Foreign Trade ... 39
McKee, Geo. W., Death of ... 645
McKenzie, Neil D. ... 313
McKinley Tariff Bill ... 91
McKnight, Wood, on Colorado Desert Lake ... 93
McLaughlin, J. ... 133
McMechen, W. M ... 78
McNab & Harlin Mfg. Co., N. Y. ... 533
McSpadden Iron Mine, Ala. ... 432
*Mechanic Arts, Abrasive Processes in ... *95, 188
*Mechanical Conveyor Stoker ... 361

Mechanical Engineers, Amer. Society of....4, 391, 509, 594
Medusaline.... 646
Meears Silver Mg. Co., Utah.... 174, 226
Meerschaum Discovered in N. M.... 81
Meetings.... Weekly
Meetings of Engineering Societies..4, 186
*Mehrsten, Geo. C., on Low Steel Tests.... 671, *678, *702, 724
Meiki Mines, Japan.... 174
Meldometer, Joly's.... 7
Mellon Bros. to Compete with Standard Oil Co.... 539
Melvy's, D. H., *Progressive Carpentry*.... 328
Melville, W. H.... 247
Member of Inst., on Societies' Meetings.... 4, 186
Memoir and Letters of Sidney Gilchrist Thomas.... 159
Mendota Mine, Colo.... 170
Merchant Steel Market Review..Weekly
Merriam Colliery, Pa.... 252, 488
Merriam, W. N.... 12
Merrill, Wm. E., Death of.... 706
Merrill's, Geo. P., *Stones for Building and Decoration*.... 354
Merrimac Mg. Co. Colo.... 314, 621
Merton, Henry A. & Co., 235, 318, 445, 518, 561
Mesabi Iron Range, Minn.... 622
Metal Alloys.... 220
Metal Industry of Hungary.... 611
Metal Market Review.... Weekly
Metal R'way Sleepers in Russia.... 361
Metal Worker.... 262
Metallic Nickel Process, Garnier's, 174, 589
Metallurg'st on Mexican Lead Smelting.... 381
Metallurgy, Introduction to the Study of.... 40
Metallurgy of Antimony.... 119
Metallurgy of Cobalt Ores.... 424
Metallurgy of Steel.... 268
Metallurgy, Theory and Practice of, 447, 482, 507
Metals, Colorations of.... 456
Metals, Conductivity of.... 587
Metals Evaporated by Electricity.... 360
Metals, Transformation of.... 390
Meteorites, Diamond-Bearing.... 588
Meteorological Congress in Munich 247
Metric System and Export Trade.... 523
Metric System in Finland.... 633
*Metropolitan Automatic Injector.... 619
Metropolitan Iron & Land Co., Mich. 132
Metropolitan Stone Co., Utah.... 277
Mexican Commercial Code.... 272
Mexican Fluxing Ores.... 65
Mexican International S. S. Co....646, 536
Mexican Lead Smelters.... 327, 381
Mexican Metallurgical Works.... 600
Mexican Mining News..16, 56, 108, 131, 174, 200, 226, 253, 278, 344, 463, 600, 686, 709, 735
Mexican National R. R.... 344
Mexican Onyx Co., Cal.... 457
Mexican Onyx Mines.... 729
Mexican Railways.... 463, 614
Mexican Silver-Lead Ores....53, 65, 91, 226, 327, 344
Mexican Tariff.... 392, 616
Mexican Trade.... 292, 536
Mexico at World's Fair.... 646
Meyerhoffer, W., on Energy.... 428
Meyer's, E., Hydrate of Alumina Process.... 534
Mezger, Ad.... 247
Mezger, Ad, on N. C. Geological Features.... 725
Mezger, Ad., on N. C. Gold Mine. 480
*Michele's Cement-Testing Machine.. 11
Michels, Ivan C., on Free Silver Coinage.... 237, 587, 673
Michigamme Iron Co.. Mich.....460, 622
"Michigan," Accident to.... 137
Michigan Cent'l R. R.... 12
Michigan Gold Mine, Mich.... 224
Michigan Mines and Mineral Statistics.... 40
Michigan Mining News. 14, 15, 80, 105, 171, 198, 131, 224, 250, 275, 315, 341, 367, 393, 434, 460, 486, 511, 538, 554, 598, 621, 648, 684, 708, 733
Michigan Mining School.... 198, 619
Michigan Red Stone Co., Mich.... 487
Mickey Breen Mg. Co., Colo.... 486, 602
Middle Bar Mg. Claim, Cal.... 707
Middle & East Tenn R. R.... 343
Middle & Lang Smelter, Idaho.... 54
Midnight Mg. & M. Co., Mont.... 197, 276
Midvale Steel Co.... 79
Mikado Mg. & Sm. Co., Colo.... 210
Miller, F. R.... 312
Millie Mg. Co., Mich.... 435
Milliken & D'Amour.... 681
Millis Ford Mg. Claim, Utah.... 200
Mills, W. O., Death of.... 364
Milwaukee Bridge & Iron Works.... 312
Milwaukee, L. S. & West'n R. R.... 735
Milwaukee & Northern R. R.... 198
Minaret Mine, Cal.... 222
Mine Accidents.... 98, 122, 219, 621, 622
Mine Foremen Examined in Pa.... 107
Mine Inspectors Examined in Ill.... 105
Mine Leasing.... 329
Mine Ropes.... 238
Mile Sale, Commission on.... 332
Mine Telephones.... 123
Mine Valuation in Ariz.... 339
Mine Valuation in Mich.... 224
Mine Workers' Assn., United..317, 436, 689
Mineral Black and Tripoli.... 74
Mineral Creek Mg. Co., Mo.... 198
Mineral Exhibit at World's Fair.... 104
Mineral Exports from Spain.... 344
Mineral Industries of the West, Minor 1
Mineral King Mg. Co., Ariz.....485, 596
Mineral Lands in Ky. to be Developed 486
Mineral Oil Exports...82, 272, 338, 602, 711
Mineral Palace at Pueblo, Colo.... 80
Mineral Point Mine, Idaho.... 732
Mineral Point Zinc Co., N. M.... 133
Mineral Production of Italy.... 46
Mineral Production of N. S. W. and Victoria.... 633
Mineral Production of Vermont.... 677
Mineral Resources of Indian Ty.... 341
Mineral Resources of Mo.... 316
Mineral Resources of Pa.... 225
Mineral Right Under Common Law.. 2
Mineral Springs in France.... 451
Mineral Surveys in Colo., 14, 53, 79, 197, 249, 339, 459, 510, 573, 597, 621, 683, 707
Mineral Wealth of Bokhara.... 270
Mineralogy for Young People.... 40
Minerals and Chemicals.... Weekly
Miners and Weekly Payment Law in Ill.... 14
Miners' Boot Waterproof.... 509
Miners' Condition in Silesia.... 239
Miners' Eyesight and Safety Lamps. 77
Miners' Lamps.... 212, 361
Miners' Strike in Belgium.... 56, 226
Miners' Strike in B. C.... 651
Miners' Strike in Colo.... 707, 732
Miners' Strike in France.... 600, 725
Miners' Strike in Ill.... 105, 250, 315
Miners' Strike in Ind.... 14, 574, 732
Miners' Strike in Iowa.... 598
Miners' Strike in Kans.... 434
Miners' Strike in N. M.... 55
Miners' Strike in Ohio.... 15, 106, 317, 396
Miners' Strike in Pa., 107, 133, 317, 370, 396, 462, 488, 513, 539
Miners' Strike in Tenn.... 104, 133, 318
Miners' Strike in Wash.... 15, 108
Miners' Strike in W. Va.... 344
Miners' Union, Central City.... 55
Miners' Union in Mont.... 236, 316
Miners' Union in Nev.... 105
Miners' Wages and Schuylkill Coal Exchange, Pa.... 55, 277, 533
Miners' Wages in England.... 56
Miners' Wages in Ind.... 511
Miners' Wages in Nev.... 461, 599
Miners' Wages in Pa. 82, 107, 173, 203, 252, 321, 369, 539
Miners' Wages in S. Dak.... 55
Miners Want to Change Iowa Laws. 341
Minerva Iron Co., Wis.... 432
*Mines and Mg. Dept., World's Fair.. 387
Mines Consolidated in Colo.... 105
Mines Using Steel Girders.... 102
Minet Aluminum Process.... 705
Mingo Sm. Co., Utah.... 82
*Mining Accounts Subdivided.... 566
Mining and Metallurgical Patents, Weekly
Mining Claim, Location of.... 589
Mining Code of Honduras.... 697
Mining Co.'s Dividends, 11, 128, 271, 390, 534, 644
Mining Co.'s Financial Statements, 55, 316, 368, 459, 461, 561, 573, 575, 707, 709
Mining Congress.... 263
Mining Congress in Denver, Colo., 209, 339, 572, 621
Mining Convention at Cheyenne, Wyo. 56
Mining Engineers, Amer. Inst. of, 4, 103, 338, 353, 422, 682
Mining Excitements in the West.... 262
Mining Exhibit at Johannesburg.... 463
Mining in Arizona.... 459
Mining in Corea.... 699
Mining in New Mexico.... 462
Mining in Servia.... 728
Mining in So. America; Why it Fails 644
Mining in Victoria.... 246
Mining Industry of Cal.... 313
Mining Industry of Mich.... 341
Mining Industry of Pa.... 343
Mining Industry of Peru.... 318
Mining Industry of Utah.... 462
Mining Law of U. S.....419, 421, 562, 564
Mining Laws of Illinois, New.... 105
Mining Lease Forfeiture.... 100
Mining Lease, Life of.... 306
Mining, Luck in.... 301
Mining Manual for 1891-2.... 354
Mining Partnerships.... 568
*Mining Pump, Worthington.... 388
*Mining Pumps, New Deane.... 7
Mining Rights in Colorado.... 262
Mining Rights Over Others' Land.... 480
Mining Stock Assn., Cal., on Stock Gambling.... 3
Mining Stocks, Boston, Denver, Lake Superior, St. Lauis, San Francisco. Weekly
Minnesota Iron Co., Minn.....112, 623, 714
Minnesota Mining News, 80, 172, 224, 250, 276, 368, 394, 460, 487, 512, 574, 622, 648, 684, 708, 733
Minnewawa Mine, Mich.... 435
Minot Mine, Colo.... 197
Mint in Philadelphia, Pa., New.... 78
Mint Reports for '91.... 570
Mirror Makers, Poisoning of.... 337
Missouri Geological Survey.... 172
Missouri Land & Live Stock Co., Mo. 250
Missouri Mining News, 14, 54, 80, 106, 132, 172, 198, 224, 250, 276, 316, 341, 367 394, 435, 469, 487, 512, 538, 574, 598, 622, 648, 684, 708, 733
Mitchell-Tranor Co., Ky.... 78
Mittleberg Lead & Zinc Co., Mo., 198, 250, 598
Modern American Methods of Copper Smelting.....563, 634
Modigliani Mines, Italy.... 318
Modoc Chief Mines Ariz.... 734
Modoc Chief Mg. Co., Utah.... 226
Modoc Mine, Colo.... 53, 197
*Moffett Portable Drill.... 309
Moffett, Wm.... 12
Mohawk Mine, Wash.... 650
Mohegan Gold Mg. Co., Cal.... 274
*Moir, E. W., on Disease Due to Compressed Air.....*73, 119, 186
Moissan, Henri, on Silver Fluoride. . 47
Moissan's Discovery of Native Fluorine.... 48
Mollie Gibson Cons. Mg. & M. Co., Colo.... 131, 314, 534
Molsberger Mines, Pa.... 488
Moltke Mine, Colo.... 53
Monarch Cons. G. & S. Mg. Co., Nev. 276
Monarch Mine, N. M.... 343
*Moncrieff's Beetaloo Dam.... 47
Monday Mine, Idaho.... 314
Mond's Compound of Iron and Carbonic Oxide.... 70, 618
Mond's Nickel-Carbon Oxide...7, 353, 355
Monitor Mine, Mich.... 80, 435, 511
Monitor Mine, Nev.... 369
Monkey Hill Mg. Claim, Mo.... 684
Monlevade Iron Works, Brazil.... 12
Monmouth Coal Owners' Assn.... 56
Mono Mg. Co., Cal.... 365
Monochromatic Light.... 675
Monograph of the Carboniferous Invertebrata of N. S. W..... 92
Monongahela Furnace Co.... 78
Monongahela Iron & Steel Co.... 585
Monongahela Natural Gas Co., Pa.... 331
Montana Central Mine, Mont.... 316
Montana Co., Ltd., Mont., 106, 251, 368, 487, 598, 733
Montana, Gold, Silver, Platinum & Tellurium Mg. Co., Mont.... 368
Montana Mining News, 15, 54, 80, 106, 132, 172, 198, 224, 251, 276, 316, 342, 367, 394, 435, 461, 487, 512, 538, 574, 598, 623, 648, 684, 709, 733
Montana Mining Review.... 682
Monte Christo Mg. Dist. Wash.... 900
Monte Christo Mg. & M. Co., Utah, 174, 734
Monterey Smelters, Mexico.... 16
Monterey & Mexican Gulf R. R.... 344
Montezuma Mine, olo.... 53, 314
Montgomery & Co., N. Y....126, 135, 388
Montreal & Kootenay Mg. Co., B. C., 370, 576
Montrose Placer Mg. Co., Colo....170, 340
Montvale Mg. Co., Tenn.... 462
Monumental Milling Co., Ore.... 317
Moon's Heat.... 41
Moore, A. W.... 457
Moore Mine, Cal.... 249
Moorhead Bros. & Co., Pa.....130, 236
Moorhead-McClane Co., Pa.... 348
Moratock Mine, N. C.... 513
Morey Mine, Nev.... 132
Morgan, Dr., on Adulterations in Basic Slags.... 676
Morgan Engineering Co., O.... 51
Moriarty Bros.' Mine, Idaho.... 223
Morning Mine, Idaho. ..366, 393, 621, 732
Morning Star Cons. Mg. Co., Colo..53, 486, 683
Morning Star Gravel Mg. Co., Cal.... 104
Morrell, Thos. T.... 221
Morris Cage Ventilator.... 446
Morris Canal.... 653
Morris Double Entry System.... 446
Morris, J. L.... 535
Morris' Long Wall System.... 446
Morris Mg. Co., Ala.... 510
Morris & Whippoorwill Mines, Nev. 395, 512
Morrison, Col. Wm. R.... 432
Morrison, John.... 51
Morristown & Cumberland Gap R. R. 706
Mortimer Mg. Co., Nev.... 512
Mortimer & Wisner, 201, 279, 437, 577, 651
Moscow Mine, Mont.... 132
Moss, P. H., Death of.... 338
Mother Lode, Idaho.... 315
Moulton Cons. Mg. Co., Mont.... 54
Mt. Baker Smoldering.... 102
Mt. Carbon Co., W. Va.....600, 650
Mt. Carmel & Natalie R. R. Co., Pa.. 575
Mt. Diablo Mg. Co., Nev.... 132
Mt. Holly Mg. & Mfg. Co., S. C.... 107
Mt. McClellan Mg. Co., Ltd., Colo. 53, 249
*Mt. Morgan Mine..... *214, *240, 278, 301
Mt. St. Elias, Alaska.... 40, 509
Mt. Savage Fire Brick.... 681
Mt. Vernon Bridge Co., O.... 509
Mt. Vernon Coal Co., Pa.... 107
Mt. Wills Proprietary Co., Australia. 271
Mountain Evans Mine, Colo.... 197
Mountain Iron Co., Minn.... 276, 648
Mountain Key Mg. Co., N. M. 173, 313, 369
Mountain Quail Mg. Claim, Colo.... 314
Mountain Quicksilver Mg. Co., Cal.. 249
Mountain View Mine, Nev.... 649
Mountains; How Made.... 341
Mudd, S. W.... 53
Mulatos Mine, Sonora.... 344
Muldoon Mine, B. C.... 370
Multiple Speed & Traction Co., Ill.... 51
Munn, L. L.... 103
Muñoz, Baltasar.... 200
Munroe, C. G.... 51, 129
Murdock, S. K., Death of.... 706
Muriate of Potash Prices for 1892.... 711
Murphy vs. Nichols, Ill.... 127
Murray Placer Camp, Idaho.... 341
Murray, R. on Tin in Victoria.... 9
Musgrove, N. W.... 221
Muskegon Car Works, Mich.... 51
Müttrich, Prof. on Influence of Forests on Temperature.... 76
Myers, Geo. H. & Co.... 107
Myers, Theo. W. on Money.... 1, 8
Myrtle Mine, Mo.... 276
Myscre Gold Fields.... 353

N

Nagle, H. F., on Thermometers; on Indiana Block Coal and on Steam Engine Economics.... 594
Nail Mens' Strike in England.... 221
Nanaimo Colliery, B. C.... 651
Nanaima Mine, Mich.... 487
Nancy Mg. Claim, Utah.... 200
Nanthahala Marble & Talc Co., N. C. 55
Naphtha Industry of Baku.... 193
Narod Granulator.... 13
Nason, Frank L.... 51, 310
Nason, Frank L., on Depth of Ore Bodies.... 310
National Academy of Sciences.... 572
National Assn. of Govt. Geologists... 312
National Boiler Inspector's Assn.... 457
National Boiler Makers' Union.... 247
National Belle Mine, Colo.... 91, 366
National Brick Mfrers.' Assn.... 391
National Electrical Assn.... 312
National Elec. Light Assn.... 196
National Forge & Iron Co., 197, 204, 456, 509, 645
National Lead Trust.....130, 248, 518, 682
National Linseed Oil Co.... 348
National Machinery Co., O.... 638
National Mine, Cal.... 597
National Mg. Co., Mich., 224, 341, 367, 434, 511
National Mg. Co., Mont., vs. Klaffky 132
National Mg. & Dev. Co., Utah.... 735
National Rolling Mill Co., Pa.... 13
National Silver Organization.... 66
National Street R'way Assn.... 484
National Tube Works Co..78, 282, 364, 714
Native Fluorine.... 48
Native Iron of Terrestrial Origin.... 240
Natrona Mg. Co., Wyo.... 463
Natural Gas Co., N. Y.... 85
Natural Gas. Cos. in Indiana to Combine.... 683
Natural Gas from Canada, Duty on... 85
Natural Gas Fields of Ohio.....55, 106, 488
Natural Gas Fields of Pa.....84, 331, 633
Natural Gas Struck in Ill.....511, 598
Natural Gas Struck in N. Y...255, 277, 488
Natural Gas Supply.... 261, 719
Navajo Mg. Co., Nev...55, 224, 523, 684, 709
Naval School at Greenwich.... 12
Nebraska Mining News.....199, 710
Neher, Frederick.... 391
Neihart-Parrott Mine, Mont.... 276
Neill, J. W., on Coal in Blast Furnace 100, 162
Neilson's Process of Determining Sulphur in Coal and Coke.... 50
Nellie Mine, Idaho.....538, 732
Nelson Mg. Dist., B. C. 16, 56, 108, 131, 370, 436, 576
Nelson, Thomas.... 645
Nenninger Condenser.... 247
Neptune Mines, Ariz.... 79
Nevada King Mines, Mont.... 54
Nevada Mill, Nev.....575, 649, 709
Nevada Mining News. 15, 81, 106, 132, 173, 199, 224, 251, 276, 316, 342, 368, 394, 436, 461, 487, 512, 575, 599, 623, 648, 684, 709, 733
Nevada Queen Mg. Co., Nev..81, 251, 487, 512, 575, 589, 623, 649, 709
Neville Direct Process.... 78, 119
New Almaden Mine, Cal.... 731
New Basis of Chemistry.... 356
New Birmingham Pipe Works, Texas 52
New Bobtail Mg. Co., Colo.... 249
New Caledonia Mining News.... 134
New California, Ltd., Colo. 14, 130, 274, 393, 537, 647
*New Conveyor Co., England.... 361
New Eberhardt Co., Ltd., Nev....252, 369, 395, 488
New England's Iron Industry.... 209
New England Mg. Co., Colo.... 537
New Glasgow Iron Co., N. S.... 541
New Gold Hill Co., Ltd., N. C.... 173
New Guston Co., Ltd., Colo....105, 117, 249, 314, 366, 434, 511, 621
New Jersey Coal Exchange.... 59
New Jersey Mining News..106, 173, 369, 539, 621, 649, 710, 733
New Jersey & Pa. Concentrating Works, N. J.... 624
New London Mine, Cal.... 573
New Mexico Mining News.....55, 81, 106, 133, 173, 199, 225, 252, 277, 317, 342, 369, 395, 436, 462, 488, 539, 575, 599, 624, 686, 710, 734
New Mexico's Exhibit at World's Fair.... 225
New Minera Mine, Italy.... 318
New No. Australian Mine, Queensland.... 200
New Publications.....3, 118, 159, 185, 210, 236, 262, 328, 354, 446, 563, 634, 696, 720
New Russell Gold Mg. Co., Ltd 355, 686
New South Wales Mineral Production.... 633
New South Wales Mining News. 56, 134, 253
New Viola Mg. Co., Idaho.....275, 460
New York Cent'l & Hudson River R. R.... 85
New York Concentrating Co., N. Y. 82, 252, 395
New York, Defense of.... 354
New York Exports of Machinery, etc.... 12, 129
New York Hill Mine, Cal.... 170
New York Mining News..82, 173, 252, 277, 395, 488, 575, 650
*New York Prices Current..25-38, 143-156, 287-300, 405-418, 549-560, 659-670
*New York Rapid Transit..91, 433, *478, 620
New York Retail Coal Exchange..255, 689, 737
New York Tax Reform Assn.....609, 620
New York & Brazil S. S. Co.... 536
New York & Florida Phos. Co., Fla.. 683
New York & Midde Coal Field R. R & Coal Co.... 627
New York & New Oaleans Coal & Iron Co., Tenn.... 650
New York & N. J. Bridge Co, 103, 510, 645
New Zealand Mining News.... 200
Newberry, Prof. J. S., on Mineral Deposits of Iron Co., Utah.... 225
Newberry, W. E.... 131
Newburg Orrell Coal & Coke Co., W. Va.... 134
Newcastle Chemical Co., England... 279
Newcastle Iron Co., Minn.... 574
Newcastle Mines, Wash.... 15
Newell, F. H. on Water Measurements.... 422
Newfoundland Mining News.....278, 370
Newhall Oil Dist., Cal.... 621
Newmarket Mg. Claim, B. C.....16, 134
Newton Mine, Cal.... 365

Niagara Falls Power Plant. ..439, 457, 465
Niagara Mg. & Sm. Co., Utah .82, 133, 200, 600
Niagara Mg. & Sm. Co. vs. Old Jord. Mg. & M. Co. 650
Nicaraguan Duties 129
Nicaraguan Mining News 134
Nichols Chemical Co. 175
Nichols vs. Murphy, Ill 127
Nicholson, Frank 136
Nickel and Iron Compounds 128
Nickel-Carbon Oxide 7, 353, 355
Nickel Deposits of the West 1
Nickel Discovery in Idaho 171
Nickel Discovery in N. C. 650
Nickel Discovery in Ontario 735
Nickel Imports of Belgium 646
Nickel Market Review 19, 85, 112, 138, 282, 518
Nickel, Metallic 174, 589
Nickel Mines and Mining 695
Nickel Plate Glass Co., O 130
Nickel Soldered to Iron 390
Nickel Steel Armor Plates 77, 327, 428, 535, 596
Nickel Steel, Elasticity of 270
Nickel Steel Experiments 327
Nickel Treated with Hydrochloric Acid 263
Niedringhaus Rolling Mill, Mo 51
Night Watch Mg. Claim, Colo 104
Niles Tool Works, N. Y 705
Nilmoth, S. C. 132
Nimick & Co., Pa 78
Nine Hours' Agitation in Ohio 15
Nipper Mg. Claim, Mont 55
Nisi Prius Cons. Mg. Co., Colo 486
Nitrate Industry of Chili 135, 397, 437
Nitrate of Soda Statistics, 201, 279, 437, 577, 6 1
Nitric Acid and Iron 165
*Nitric Acid Condensers, Guttmann's 452
Nitrogen, Density of 483
Nitze, H. B. C. 51, 220
Nitze, H. B. C. on Blast Furnace Temperature 220
Ni-Wot Mine, Colo 53
Ni-Wot & Madelaine, Ltd., Colo 340
Noah Mine, Colo 197
Noble Gold Milling Process 213
Nolan Creek Mg. Co., Colo 14, 130, 274
Non-Dividend Paying Mines Table Weekly
Norrie Mine, Mich 132
Norris, R. Van H. on Centrifugal Ventilators 424
*Norris, R. Van H. on Pope Haulage Systems 164, 190
Norristown Steel Co., Pa 51, 312
North Belle Isle Mg. Co., Nev. 15, 55, 81, 132, 173, 199, 368, 395, 512, 539, 575, 623, 649, 709
North Bonanza Mine, Nev 342
North Buffalo Canal 248
North Carolina Coal Fields 168
North Carolina Geological Features 725
North Carolina Gold Mg. & Bullion Co., N. C. 686
North Carolina Gold Mines 480
North Carolina Mining News 55, 173, 317, 369, 436, 462, 513, 539, 650, 686
North Carolina Phosphate Industry 577
North Carolina Steel & Iron Co 278
North, Col 397
North Commonwealth Mg. Co., Nev. 15, 55, 81, 173, 199, 224, 251, 368, 539, 593, 649, 684, 709
North Fork Mg. Dist., Cal 222
North Gould & Curry Mg. Co., Nev 369
North Mexican Mg. & M. Co., Ltd., Chihuahua 108
North Pabst Iron Mg. Co., Mich. 574, 684
North River Bridge 619
North Star Imp't Co., Col 13
North Star Mine, Colo 393
North Star Mg. Co., Cal 131, 170, 339
North Star Mg. Co., Mont 172
North Tamarack Mg. Co., Mich 224
Northern Belle Mg. Co., Nev 81
Northern Pacific Coal Co 458
Northern Pacific Land Grant Case 445
Northern Pacific R. R. vs. R. P. Barden *et al* 54
Northern Pacific R'way B. C 576
Northland Mg. Co., Utah 711
Northrop, John I., Death of 12
Northwest Ga. Iron & Coal Co., Ga 340
Northwest Mine, Ariz 313
Northwestern Coal & Iron Co., Nev 462
Northwestern Natural Gas Co., O 106
Northwestern R. R. Co. 343
Norton Bros., Ill 273
Norton Iron Works, O 485
Norwegian Mining News 56
Nottingham Colliery, Pa 1, 396, 488, 523
Nova Scotia Steel & Forge Co., N. S 432
Nova Scotian Mining News, 56, 108, 226, 278, 437, 463, 489, 541, 600
Nowell, T. S 237
Nueva Australia Mill, Med 200
Nuevo Leon Mining News 16, 134, 226
Number One Mine, B. C 15, 108, 134, 370

O

Oakdale Colliery, Pa 599
Obituary ..... Weekly
Occidental Mg. Co., Nev 55, 81, 133, 199, 225, 277, 317, 395, 462, 488, 513, 539, 575, 623
Oest Mine, Nev 106, 253, 539
Ogden La Plata Mg. & M. Co., Utah 624
*Ogden Mines, N. J *425, 539, 733
O'Hara Glass Co., Pa 130
Ohio Gulch Mg. Co., Colo 223
Ohio Iron & Steel Co., O 204
Ohio Mine, N. M 710
Ohio Mg. Co., Colo 647
Ohio Mining News 15, 106, 173, 199, 252, 317, 243, 396, 436, 488, 599, 734
Ohio Mg. & M. Co., Colo 53
Ohio Oil Co., O 173
Ohio Phosphate Co., Fla 171, 597
Ohio River Navigation 70
Ohio & Pa. Coal Co 111
*O. H. Martin Steel 671, *678, 702, 724
Oil Discovery in Ontario 735
Oil Fields of Florence, Colo 422
Oil Fields of Indiana 171
Oil Fields of Pennsylvania 343
Oil Fields of Peru 121, 134
Oil Fields of West Virginia 56
Oil Imports of India 391
Oil Imports of China 56
Oil Producers' Protective Assn 462
Oil Refinery at Pueblo, Colo 197
Oil Struck at Mattole, Pa 170
Oil Struck at Walburg, Germany 463
Oil Struck in Ala 433
Oil Struck in Cal 365
Oil Suit in W. Va 313
Oil Tank Steamers 620
Oil Through Rates on 321
Oil Used for Lubricating Engines 570
Oil Well, Largest 173, 177
Oil Wells Bored in Coal Beds 369
Oil Wells in Colo 53
Oil Wells in Pa 174
Oil Wells in Peru 56
Oils, Lubricating Quality of 532
Oils, Refining of 102
Okanogon Red. Co., Wash 200, 540
Olcott, E. E 169, 535, 572, 620
Old Abe Mine, N. M 82, 343
Old Alcalde Furnace, Texas 536
Old Cochran Mine, N. M 343
Old Dominion Copper Co., Ariz., 130, 170, 339
Old Dominion Mine, Utah 735
Old Dominion Mine, Wash 278, 540
Old Jordan Mg. & M. Co., Utah 174, 650
Old Jordan & Galena Mg. Co., Utah 318
Old Material Market Review 138, 283, 322, 318, 629, 655, 690, 711
Old Mexican Mine, Cal 339
Old Rail Market Review, 19, 60, 86, 112, 178, 204, 230, 256, 440, 466, 518, 739
Old Telegraph Mines, Utah 82, 393
Old Timer Mg. Claim, B. C 108
Olean Bluestone Quarry, N. Y 173
Oliver Coke & Furnace Co., Pa 196, 225
Oliver, Gen. Paul A 424
Oliver & Roberts Wire Co., Pa 457
Ollie Mg. Claim, B. C 16, 108
Omaha & Grant Sm. & Refg. Co., 175, 178, 199, 222, 230, 248, 371, 580, 596
Omega Mg. Co., Wyo 174
On Deck Mg. Claim, B. C 134
O'Neil & Peterson, Pa 107
Only Chance Mine, Colo 80
Ontario Colliery, N. S 108
Ontario Mine, Mont 316, 342, 435
Ontario Mg. Claim, Colo 104
Ontario Mg. Co., Utah 82, 200, 318, 396, 436, 514, 524, 576, 600, 650, 686, 734
Ontario Mining News 56, 108, 174, 735
Ontario & Western R. R. 439
Ontonagon River Bridge 169
Ontonagon & Brule River R. R. Co 598
Onyx Mines in Mexico 729
Onyx Quarries in Ariz 79, 647
Onyx Quarries in Mo 316
Opals Found in New South Wales 134
Ophir Mine, Idaho 14, 314
Ophir Mg. Co., Mont 363
Ophir Mg. Co., Nev., 199, 225, 250, 369, 395, 462, 513, 709
Ophir & Lakeview Mine, Utah 625
Ora Bella Mine, Ariz 313
Ore Bodies Improved with Depth 310
Ore Deposition by Sublimation 524
Ore Deposits in Iron Co., Utah 225
Ore Deposits of Leadville 209
Ore Dock at Menominee, Mich 105, 198
Ore Handling at Bunker Hill Mine, Idaho 99
Ore Receipts at Salt Lake City, Utah, 318, 436, 576, 686, 734
Ore Sampling 264
Ore Shipments from Lake Superior Mg. Dists., 172, 224, 250, 339, 365, 393, 433, 458, 485, 510, 574, 646
Ore Shipments from Park City, Idaho 134
Ore Shipments from Silver City, N. M. 106, 342, 575
Ore Shipments from Silverton, Colo 340
Oregon Gold Co., Ore 82
Oregon Imp't Co, Wash 15
Oregon Mg. Claim, Cal 131
Oregon Mining News 82, 107, 133, 200, 252, 317, 369, 575, 599, 624, 686, 710
Oro Fino Mg. Co., Idaho 80
Oro Grande Mg. Dist., Cal 274
Oroville Mg. Dist., Cal 433
Orphan Boy Mine, Colo 105, 197
Osborn Mine, Cal 197
Osborn, Samuel, Death of 103
Oscar Gold Mg. Co., Ltd., Norway 56
Osceola Cons. Mg. Co., Mich., 14, 54, 198, 367, 434, 538, 684
Osceola Gravel Mg. Co., Nev 55, 133
Osmiamic Acid 128
Oso Negro Mg. Co., Sonora 174
Oswego Iron Mg. Co., Ore 621
Oswego Mg. Co., Mo 54, 250, 276, 461, 487, 512
Otis Steel Co., Ltd 248
*Ouray, Colo 162
Ouray Co. Colo., Mines 366
Overland Mg. Co., Wyo 134
Overman Mg. Co., Nev 15, 106, 277, 317, 488, 513, 539, 575, 599, 649, 685, 709
Overton, Capt 199
Overwinding in Collieries 474
Owen, Ira H., Death of 12
Owen, Tubal C 103
Oxford Gold Mg. Co., N. S 26
Oxford Iron & Nail Co., N. J 509
Oxidation of Chromium Ores 390
Oxide of Gold 98
Oxidizing Chrome Ores 194
Oxygen, Density of 483
Ozark Onyx Co., Mo 316
Ozokerite Discovery in Oregon 388
Ozokerite Mg. Co. vs. Siter 592
Ozokerite Production in U. S 127
Ozone, New Way to Prepare 220

P

Pacheco, Carlo, Death of 338
Pachuca Mining News 344
Pacific Coast S. S. Co 134
Pacific Coast Survey 46
Pacific Gold Mg. Co., N. M 343
Pacific Hydraulic & Ditch Co., Ore. 599
Pacific Mine, Mont 132
Packard, R. L., on Aluminum 50
Packer Colliery, Pa 133
Packer, John B., Death of 51
*Padlock, Corbin 268
Page, Wm. Byrd 129, 221, 730
Paint River Mine, Mich 394, 435
Palatine Engineering Co 363
Palero Mg. Co., Mo 394
Palmer, Chas. F 14, 170
Palomas Chief Mine, N. M 317
Pan-American Transportation Co 12
Pana Coal Co., Ill 131
Parues Mine, Mont 15
Paris Stock Quotations ..... Weekly
Park Bros. & Co 706
Park City Mg. Co., Utah 318
Park Mine, Mont 172
Park Place Disaster, N. Y 301
Parker, C. L 172
Parker-Douglas Co., N. S 463
Parker, E. W., on Asbestos 270
Parker, E. W., on Asphaltum 193
Parker, E. W., on Barytes 304
Parker, E. W., on Graphite 431
Parker, E. W., on Infusorial Earth 212
Parker, E. W., on Ozokerite 127
Parker Freehold Mines, N. C 433
Parker Gold Mg. Co., N. C 369, 513, 686
Parker, John H 509
Parker Mine, Idaho 249
Parker Mine, N. M 343
Parnell Mine, Utah 396
Parole Mine, Colo 314
Parrott Silver & Copper Co., Mont., 55, 132, 199
Parsons', W. B., Rapid Transit Plans 433
Parsons & Pettit 397, 515
Pasadina Mg. Co., Utah 370
Pascoe, Peter 105
Pass Creek Mine, Wyo 318
Patent Assignments 127
*Patent Development Co, N. Y ..... 123, * 268
Patents, Mining and Metallurgical ..... Weekly
Patriot Mine, Nev 488
Patterson Anthracite Mg. Co., Pa 513
Patterson Coal Co., Pa 624
Patton Mines, Ala 485
Pawtucket Pumping Engine 555
Pay Rock Silver Mines, Ltd., Colo 366
Paymaster Mine, Colo 537
Paymaster Mine, Idaho 538
Peabody Mine, Mont 394
Peacock Mine, Idaho 131
Pearl Mine, Utah 107
Pearson Coal, Iron & R. R. Co 248
Peat Industry of Sweden and Germany 636
Pechin, E. C., on Va. Potsdam Ores 333
Peck, P. P 706
Peck, Lee 645
Pedro, Manual San, vs. J. B. Cooper. 649
Pedroso Co., Spain 57
Peer Mg. Co., Ariz., 52, 222, 248, 273, 365, 485, 573, 683
Peerless Jennie Mine, Mont 342
Peerless Maud Mine, Colo 314
Peerless Mg. Co., Ariz 52, 222, 273, 365
Pelton Water Wheel Co., Cal 13, 338
Peñaflor Phosphate Mines, Spain 57
Pence Mine, Mich 435
Pencoyd Iron Works, Pa 103
Pendleton Mine, Me 648
Pendulum as a Balance 724
Penfield, J. W. & Son, O 535
Peninsula Gold Mg. Co., Mich 224
Peninsula Mg. Co., Mich 14, 54, 132, 224, 434, 538, 684
Peninsular Phosphate Co., Fla 275, 460, 597
Penn Iron Works, Pa 13, 105, 312, 328, 487, 513, 622
Penny, James, Death of 572
Pennsylvania Bolt & Nut Works, Pa 13, 78, 247
Pennsylvania Coal Co, Pa 686
Pennsylvania Mg. Co., Colo 53, 80
Pennsylvania Mining News 15, 55, 82, 107, 133, 173, 200, 225, 252, 277, 317, 343, 369, 396, 436, 462, 488, 513, 539, 575, 599, 624, 650, 686, 711, 734
Pennsylvania Plate Glass Co 312
Pennsylvania R. R 15, 373, 423
Pennsylvania Salt Mfg. Co., Pa 279
Pennsylvania Steel Casting Co 312
Pennsylvania Steel Co., Pa, 13, 103, 138, 535, 580
Penrod, Dr. H. C 457
Penrose, Dr. R. A. F 126, 272
Penrose, Dr. R. A. F., on Manganese 126
Penrose Mine, Colo 105, 574, 649
Peoria Mg. Co., Colo 314, 621
Periclase, Artificial 681
Perkins, Chas. N 312
Perkins, T. H 607
Perrin Mg. Claim, Mont 54
*Perry, Geo. W., on Marble 453
*Perry's Steam-Engine Indicator 46
Pershbaker Mine, Cal 443, 731
Peru, a New Route Through 129
Peru and World's Fair 379
Peruvian Mining News 56, 134, 318
Peruvian Petroleum 121, 134, 472
Peruvian Shipping Laws 129
*Peters, E. D 6, 432, *565, 634, 719
Peters, E. D., on Ely Mine, Vt 6
Peters', Dr E. D., *Modern Amer. Methods of Copper Smelting* 3, 634
Petro Mg Co., Utah 82, 226, 295
Petroleum as Fuel 122
*Petroleum Atomizer, Fellows' 38
Petroleum Deposits in Greece 108
Petroleum Fuel Tests 364
Petroleum in Servia, Russian 336
Petroleum Industry of the West 1
Petroleum Lighting System, New 338
Petroleum, Origin of 705
Petroleum Refining 102
Petroleum Trade Abroad, 9, 84, 169, 273, 500, 536
Petroleum Trust in Russia 735
Petroleum Used Under Boilers 312
Pewabic Mg. Co., Mich 14, 54, 315, 487
Phelps Mfg. Co 706
Phelps, Wm. Walter 364
Philadelphia Co., Pa 331, 396, 686
Philadelphia Engineering Works, Pa. 13
Philadelphia Gold Mine, N. S 278
Philadelphia Iron Market Review, Weekly
Philadelphia & Reading C. & I. Co., Pa 15, 137, 173, 200, 396, 436, 514, 624, 653
Philadelphia & Reading R. R. Co., 18, 128, 585, 713
Phillips, F. R 312
Phillips, Prof. Wm. B 620
Phillipsburg, Beech Creek & Osceola Check Weighman Ass'n 82
Phipps, Henry 312, 572
Phipps & Co 596
Phœnix Bridge Co. vs. Keystone Bridge Co 484
Phœnix Co., Germany 481
Phœnix Lead Co., Colo 79, 223
Phœnix Mfg Co., Ariz 510
Phœnix Phosphate Co., Fla 223
Phosphate Exchange at Ocala, Fla. 366
Phosphate Lands of Canada 109, 735
Phosphate Lands of Florida, 14, 105, 171, 223, 275, 359, 366, 434, 460, 486, 525, 537, 586, 597, 597, 612, 642, 672, 674, 697.
Phosphate Lands of N. C 577
Phosphate Lands of S. C 57, 167
Phosphate Lands of Spain 57, 463
Phosphate Law of Florida 40
Phosphate of Lime Co., Ont 174
Phosphate Rock Shipments from Charleston, S. C., 83, 227, 345, 371, 464, 601
Phosphate Rock Shipments from Florida 109
Phosphate Rock Shipments from Montreal 515
Phosphates of Algeria and Tunis 614
Phosphates of America 380, 563
Phosphatic Chalk at Taplow, Eng 502
Phosphor-Bronze Sm. Co., Pa 196
Phosphoric Acid in Basic Slag 362
Phosphorus Expanded by Heat 311
Photochronograph 75, 360
Pickands, Mather & Co 706
Pierce, H. H., on Free Coinage 610
Pig Iron Production, in U. S 118, 471
*Pig Iron, Sulphur Eliminated from 592
Pigeon Hill Granite Co., Mass 171
Pike Mfg. Co., Ala 458
Pinder, J. W 432
Pine Mountain Coal & Iron Co., Ky 80
Pine Nut Cons. G. & S. Mg. Co., Nev 276
Pine Nut Mg. Dist., Nev 316
Pinetucky Mine, Ala 130
Pioche Cons. Mg & Red. Co., Nev., 81, 224, 251, 316, 395, 461, 488, 684
Pioneer Mine, Colo 14
Pioneer Mine, Idaho 80
Pioneer Mine, Mont 512
Pioneer Mg. & Mfg. Co., Ala 103, 278
*Pipe Cutter and Wrench 308
Pipe Line Certificates ..... Weekly
*Pipe Tapping Apparatus, Smith's 595
Piqua Rolling Mill, O 78
*Pit Tub and Wagon Bearings 75
Pitcher, O. W 708
Pitkin, Gov. P. P., Death of 129
Pittsburg Boiler Scale Resolvent Co. 730
Pittsburg Bridge Co., Pa 432
Pittsburg Coal Trade ..... Weekly
Pittsburg Coal & Coke Co., Ind 223
Pittsburg Cons. Gold Mg. Co., Nev., 106, 251, 277, 395, 488, 599, 733
Pittsburg Gas, Coal & Coke Co., W. Va 514
Pittsburg Iron Market Review ..... Weekly
Pittsburg Iron & Steel Engineering Co., Pa 338
Pittsburgh Oil Well Supply Co 130
Pittsburg Red Co., Pa 157, 261, 572, 730
Pittsburg & Lake Angeline, Mich 341
Pittsburg & Mexican Mg. Co., Mex. 686
Place River Phosphate Co., Fla 57, 109
Placer Claims, Assessment Work on. 92
Placer Deposits in Alaska 52
Placer Deposits in Ariz 196
Placer Deposits in Cal 222, 683
Placer Deposits in Idaho 341
Placer Deposits in Nev 709
Placer Deposits in N. M 342
Placer Deposits in Oregon 252
Placer Deposits in Sonora 226
Plainview Mine, Idaho 732
Plaster, Process for Hardening 271
Plate Rock Phosphate Co., Fla 460
Platinum and Its Alloys 565
Platinum Deposits in N. S. W 252
Platinum Discovery in N. S. W 253
Platinum, Price of 220
Plattner System 79
Pleasant Valley Coal Co., Utah, 253, 462
Pless Dredging & Reclamation Co., Nev 342
Plumas Eureka Mine, Cal 365
Plumbago Mg. in Ceylon 724
*Plyers, Steel Cutting 268
Plymouth Coal Co., Pa 173, 252
Plymouth Cons. Gold Mg. Co., Cal., 13, 104, 489, 647
Plympton's, G. W., *How to Become an Engineer* 416
Pocahontas Mg. Co., W. Va 458
Pocahontas Mg. Claim, Colo 105
*Pocket Level and Plumb 271
*Pocket Level, Tower 384
Poisoning of Mirror Makers 337
Polar Planimeter 3
Polar Star Mine, Colo 314

Polk County Phosphate Co., Fla..... 14
Pollett, W. S., Death of..... 129
"Pomeroy" Burned..... 177
"Pontiac," the..... 78
Poorman Mine, B. C..... 56, 370
Poorman Mine, Colo..... 313, 340
Poorman Mines, Idaho....14, 171, 223, 249, 275, 301, 314, 486, 511, 708, 732
Poor's Handbook of Investment Securities..... 446
Poor's Manual of American Street Railways..... 354
Poor's Manual of Railroads..... 185, 328
Pope, Graham..... 367
Pope's, J., Sons Co..... 604
Population and Rainfall..... 725
Population of British India..... 48
Population of Large Cities..... 329
Porcelain, New Coloring Matter for.. 481
Port Arthur, Duluth & Western R.R., Minn..... 394
Portage Entry Sandstone Assn, Mich. 435
Portage Lake Canal..... 51, 105, 198
Portage Red Sandstone Co., Mich ... 684
Porter, J. N..... 78, 169
*Porter, John A., Life of..... 357
Porter's, Robt. P., Report on the Eleventh Census..... 610
Portland Cement in Turkey..... 363
Portland Mine, S. Dak..... 343
Porto Rican Foreign Trade..... 272
Portsmouth Fire Brick Co., O..... 485
Portuguese Mining News..... 515
Positions Vacant..... Weekly
Potassium, Electrolysis of..... 361
*Potassium Process..... 533
Potosi Mg. Co., Colo..... 199, 225, 251, 366
Potsdam Brown Ores, of Va..... 333
Pott Tank Co., Germany..... 273
Pottery Works at Argo, Colo..... 78
Pottsville Iron & Steel Co., Pa., 13, 103, 120, 247, 273, 361, 457, 572
Potwig & Holmes, Mo..... 250
Powder, Smokeless..... 500
Powell, Major J. W., on Flooding of Colorado Desert..... 9, 93
Powell, Wm., Co..... 273
Power Plant at World's Fair..... 219
Power vs. Klein..... 480
Prangee, James, Death of..... 596
Pratt Mines, Ala., Explosion in..... 458
Precipitated Phosphates..... 478
Precipitation of Gold from Chloride Solution..... 211
Prehistoric Relics in O. and Ind..... 475
Preliminary Survey and Estimates.. 185
*Prentice Engine Lathe..... 705
Preston Colliery, Pa..... 55
*Prices Current..25-38, 143-156, 287-300, 405-418, 549-560, 659-670
Prices of Mining Stocks, Rarer Metals, Silver, Trust Stocks..... Weekly
Primeroso Mine, Ariz..... 731
Princess Mg. Co., Nev..... 15, 81
Princeton College Geol Expedition.. 103
Principio Furnace & Rolling Mill Co. 432
Proctor, John R..... 684
Progressive Carpentry..... 328
*Prospector, the..... 578
*Prospector, the Old California..... 537
*Protractor, Kennelly's..... 126
Prout Bros. Granite Co., Mass..... 171
Provincial Natural Gas Co., Ont. .85, 169
Prussian Colliery Accidents..... 269
Prussian Mine, Colo..... 365, 486
*Puddling Furnace, James..... 481
Pueblo Mineral Palace, Colo..... 80
Pueblo Sm. & Refg. Co., Colo 91, 105, 170, 197, 223. 363
Puente Oil Co., Cal..... 597
Pullan, R. B., on Free Coinage..... 673
*Pulley with Loose Hub..... 614
Pulsometer Tests..... 595
*Pump, Gould Electric..... 334
*Pump, Worthington Mg..... 388
Pumping Assn., Comstock..... 55
Pumping Plant at World's Fair..... 247
*Pumps, New Deane..... 7
Puritan Mg. Claim, B. C..... 134
Pusey & Jones Co., Del..... 272
Putnam vs. Hardman..... 600
Puzzler Mine, Colo..... 53, 683
Pyrenees Mine, Colo..... 511
Pyramid Mine, Cal..... 393
Pyrites Deposit in Ga..... 223
Pyritic Smelting..... 174, 471, 721

Q

Q. E. D. on Bost. & Mont. Cons. C. & Mg. Co..... 524
Quadrant, the..... 587
Quarries in Ariz..... 79
Quarries in Cal..... 197
Quarries in Colo..... 104
Quarries in Conn..... 171, 201
Quarries in Ga..... 105
Quarries in Iowa..... 171
Quarries in Me..... 80
*Quarries in Mass..... 171, *726
Quarries in Mich..... 105
Quarries in Mo..... 316
Quarries in N. Y..... 173, 248
Quarries in Ohio..... 252
Quarries in Pa..... 201
Quarries in Vt..... 56, 174
Quarries in Va..... 344
Quarries in Wis..... 200
Quarrying Industry of U. S..... 1, 10
Quarryman and Contractor's Guide. 697
Quartz Mining in Cal..... 621
Quartz Mountain Mine, Cal..... 393
Quartz Valley Gold Mg. Co., Cal..... 707
Quartzite Mines, Colo..... 170
Quebec Mining News..... 134, 735
Queen Mg. Co., Wash..... 540
Queen of the Hills Mg. Co., Mont., 172, 251, 316, 435
Queen Victoria Mine, B. C..... 56, 108
Queensland Mining News..... 200, 278
Quicksilver Discovery in Tamaulipas. 16
Quicksilver Exports..... 282
Quicksilver in Oregon..... 133
Quicksilver Market Review..... Weekly
Quicksilver Mines in Cal...79, 393, 459. 731
Quicksilver Compound of Iron and Carbonic Oxide..... 70
Quincy Mg Co, Mich., 14, 54, 109. 132, 172, 198, 315, 341, 434, 487, 516, 538, 601, 622, 684, 733

R

Radford Pipe Works Co., Ala..... 52
Radford Pipe & Foundry Co..... 645
Raft, a Large..... 83
Raht, August..... 645
Rail Fastenings Market Review..Weekly
Railroad Between Brazil and Bolivia. 56
Railroad in Alaska..... 13
Railroad in British Columbia..... 15
Railroad in Nova Scotia, New..... 56
Railroad Rates in Russia..... 134
Railroads in Arizona..... 536
Railroads in Brazil..... 272
Railroads in Buffalo..... 137
Railroads in Canada..... 306
Railroads in England..... 332
Railroads in Mexico..... 463, 614
Railroads in U. S..... 328
Rails, German, Steel..... 361
Rails, 95-Pound Steel..... 39
*Railway Bridges of Low Steel..671, *678, *702, 724
Railway, Lartigue..... 185
Railway Problem..... 92, 210
Railway Sleepers in Russia, Metal.... 361
Railway Sleepers, Steel..... 128
Railway Zone Systems..... 40, 183, 304
Rain Created by Concussion..... 380
Rainboth, E..... 174
Rainbow Mine, S. D..... 55
Rainbow Mine, Utah..... 370
Rainey Banks C. & C. Co., Pa..... 107
Rainfall and Population..... 725
Rain-in-the-Face Mine, N. M..... 343
Ralph, Joseph..... 221
Randol, J. B..... 535, 731
Randolph Coal Co., W. Va..... 514
Randolph, John C. F..... 221
Raney & Berger Iron Co., Pa..... 103
Rapid City Oil Co., S. D..... 55
*Rapid Transit in New York....91, 433, *478, 620
Rathbone, Henry W., Death of..... 391
Rattlesnake Mg. Claim, Mont..... 198
Raunheim, S. E..... 247, 391
Raymond, R. W., on a Typical Case. 93
Raymond, R. W., on American Forestry..... 720
Raymond, R. W., on Assessment Work on Placer Claims..... 92
Raymond, R. W., on Cloud Compellers..... 380
Raymond, R. W., on Defense of New York..... 354
Raymond, R. W., on Forestry..... 184
Raymond, R. W., on International Geological Excursion..... 586
Raymond, R. W., on Management of Institute..... 4
Raymond, R. W., on Mineral Right Under Common Law..... 2
Raymond R. W. on Ore Deposition by Sublimation..... 524
Raymond, R. W., on Scientific Alliance..... 561
Raymond, R. W., on U. S. Mining Law..... 419, 562, 564
Raystown Branch Coal Co., Pa..... 396
Reading Coal & Iron Co., Pa..... 539, 713
Reading Iron Co., Pa..... 51, 706
Reading R. R..... 737
Reciprocity Treaties..... 380
Reciprocity with Guatemala..... 129
Reciprocity with San Domingo..... 272, 392
Reciprocity with San Salvador..... 391
Reciprocity with Venezuela..... 12, 103
Rector Group of Mines, N. M..... 395
Red Ash Coal Co., W. Va..... 514
Red Cloud Mine, Colo..... 197
Red Cloud Mg. Co., Idaho..... 171, 249
Red Elephant Mg. Co., Idaho..... 131. 366
Red Jacket Mine, Wash..... 734
Red Mountain Silver Mines, Ltd., Colo. 486
Reed, H. W., on Free Silver Coinage. 186
Reed & National Mg. Co., Colo..... 249, 340
Reefe, Robt. E., Death of..... 51
Reeves Gold Mg. Co., Cal..... 131
Refining Petroleum..... 102
*Regan Vapor or Gas Engine..... 219
*Register, David's Counting..... 388
Reid, John S..... 197
Reinbold, H., on Uranium in S. Dak. 75
Reliance Colliery, Pa..... 55
Remington Bros.' Newspaper Manual 380
Reno Reduction Works, Nev..... 106
Renton, Capt Wm..... 247
Report on the Internal Commerce of the U. S..... 92
Reports on Mining Industry of New Zealand..... 697
Republic Mg. Co., Mich...105, 112, 172, 224, 622
Republic Reduction Co., Mich..... 648
Republican Iron Works..... 78
Rescue Silver Mg. Co, Ariz..... 248
Reservation Mine, N. M..... 106, 343
Reserve Mine, N. S..... 278
Retail Coal Exchange, N. Y..255, 689, 737
Retaining Walls for Earth..... 3, 118
Retriever Mg. Co., S. Dak..... 82
Revelstoke Mg. Co., B. C..... 108
Reverberatory Furnaces and Matte Smelting for Copper and Silver. 74, 160
Revere Coke Co., Pa..... 624
Rex Mg. & Sm. Co., Mo...435, 593, 622, 648
Reynolds, A. E..... 130
Rhenish Steel Works, Germany..... 481
Rialto Mg. Co., Colo..... 14, 314, 340
Rice, Geo. Arthur..... 364
Rice, Geo. S..... 78
Rice & James, Mo..... 54, 198
Rich Hill Mine, Ariz..... 731
*Richards, John, on Abrasive Processes in Mechanic Arts..... *95, 188
Richards, R. H., on Stadia Work..... 422
Richards & Hartley Glass Co., O..... 130
Richmond Cons. Mg. Co., Nev.. 251, 395, 512
Richmond Mill, N. M..... 342
Richter's, Victor von, *Chemistry of the Carbon Compounds*..... 328, 720
Rickard, T. A., on Broken Hill Mines 530
*Rickard, T. A., on Mt. Morgan Mine. 214, 240
Rider Mg. Claim, Colo..... 131
Ridgeway, Jacob E..... 82
Riggs Mine, Colo..... 314
Riker, J. L. & D. S..... 135
Ringwalt, J. S., Death of..... 169
Rio Grande Southern Railway..... 170
Rio Tinto Co., Ltd., Spain..... 471, 576
Ripley & Co., Pa..... 130
River Furnace..... 706
*River Mining in Cal..... *266, 636
Riverside Mine, Kans..... 367
Roach Mg. Claim, Cal..... 197
Road Improvements..... 117
Roads, Need of Better..... 636
Roane Iron Co., Tenn..... 510
Roaring Lion Mine, Utah..... 226
Roaring Springs Land & Mg. Co., Mo. 198, 224, 394, 684
Roasting Furnace Dust..... 49, 237
Robart, Dr. Heber..... 247
Robert Emmet Mg. Claim, Colo..... 53
Roberts-Austen's, W. C., *Introduction to the Study of Metallurgy*..... 40
Roberts-Austen, W. C., on Metallurgy..... 447, 482, 507
Roberts, G. G..... 129
Robinson, Col..... 313
Robinson Con. Mg. Co, Colo..... 537
Robinson, Moncure..... 572
Robinson, Wm. H. H., Death of..... 364
Rochester & Pittsburg C. & I. Co., Pa. 650
*Rock Breaker, Lowry..... 63
Rock Hill Iron & Coal Co., Pa..... 396
Rock Salt Cos. in Kans to Combine. 684
Rock Salt Discovered in Germany.... 134
Rock Springs Mine, Wyo..... 318
Rockdale Mg. & Mfg. Co., Tenn..... 624
Rockefeller, F..... 598
Rockefeller, John D..... 51
*Rockport Granite Co.'s Quarry..... 726
Rockwell, C. H..... 484
Rocky Glen Mfg. Co., Cal..... 597
Rocky Mountain Oil Co., Colo..... 14, 79
Rocky Ridge Coal Co., Wash..... 600
Roderick Edward..... 252
Roebling's, John A. Son's Co., N. J 103
Roll Turning for Sections in Steel and Iron..... 634
*Rollason Gas Engine..... 481
Rolling Mill Machinery in Brazil, American..... 12
Rolling Mill Evolution..... 590, 616
Rolling Mills and New Wage Scale.... 13
*Roney Mechanical Stoker..... 242
Roofing Slate Market Review..... 21
Root vs. Cashman..... 84
*Rope Grip, Arthur's..... 271
*Rope Haulage Systems..... 164, 190
Rope Transmission of Power..... 456
Ropes Gold & Silver Mg. Co., Mich. 224
Ropes, Julius..... 119, 460
Ropes Used in Mines..... 238
Rose of Breckenridge Mg. Co., Colo.. 314
Rose Phosphate Co., S. C..... 107
Rose, Samuel A..... 78
Roslyn Mine, Wash..... 540
Rossendale Belting Co., N. J..... 620
Rossiter Mg. Co., Colo..... 197
Rostaing, Garchez & Geille and Waste Glass..... 50
Rothamsted Station, England..... 244
Rothwell, R. P..... 73
*Rothwell, R. P., on Precious Metal Production of U. S..... 65, 72, *98
Rover Creek Mg. Dist., B. C..... 56
Royal Charter Mg. Claim, B. C..... 134
Royal Silver Mines of Potosi, Bolivia 318
Rubies from Burmah..... 48
Ruby Basin Mines, S. Dak..... 343
Ruby Creek Mg. Dist., Idaho..... 14
Ruby Creek Mg. & Townsite Co., Idaho..... 53
Ruby Hill Tunnel Co., Nev..... 512
Ruby King Mg. Co., Colo..... 131
Ruby Mine, Mont..... 648
Ruby Mg. Co., Ltd., Nev..... 368, 395, 575
Ruby Trust Mg. Co., Colo..... 340
Rule, J. G..... 247
Running Lodge Mg. Co., Colo..... 732
Russell, C. A..... 486
Russell Mine, N. C..... 317, 436
Russell Process..... 133, 318
Russell, Prof. I. C..... 509
Russell's, Prof. I. C., Expedition to Mt. St. Elias, Alaska..... 40
Russian Coal Trade..... 8
Russian Imports of English Coal..... 263
Russian Metal Railway Sleepers..... 361
Russian Mining News..... 134, 253, 735
Russian Oil in China..... 56
Russian Petroleum in Servia..... 336
Russians Visiting American Placer Mines..... 645
Rust, Wm, Death of..... 509
Ruth Mine, Idaho..... 223, 275, 460

S

Saddle Rock Mine, Utah..... 263
Sadtler's, S. P. *Handbook of Organic Chemistry*..... 446
Safety Lamps..... 212, 361
Safety Lamps and Miners' Eyesight.. 77
*Safety Scratch Awl..... 268
Safford, A. P. K., Death of..... 706
*Sahlin, Axel, on Concentrating Plant at Weldon, N. J..... 588
Sailor Jack Mine, Cal..... 393
St. Andrews Mg. Co., S. C..... 107
St. Chades Iron Furnace, Pa..... 338
St. Clair Tunnel..... 255, 338, 390, 620
St. Etienne Mine Disaster in France. 686
St. Jacob's Mg. Co., Colo..... 249, 340
St. Joe & Mineral Farm Cons. Mg. Co., Colo..... 131
St. John, Chas., Death of..... 51
St. John's Mine, Colo..... 105
St. Lawrence Mine, Mont..... 132
St. Louis-Gunnell Mg. Co., Colo..... 314
St. Louis Hydraulic Press Co..... 620
St. Louis Lead Market Review...Weekly
St. Louis Mine, Colo..... 537
St. Louis Mg. Claim, Colo..... 314
St. Louis Mg. Co., Mont..... 342
St. Louis Mining Stocks..... Weekly
St. Louis Sm. & Ref. Co., Colo..... 573
St. Louis, Stamping Co..... 572
St. Louis Steel Fdy. Co..... 364
Salem Wire Co., O..... 169
Salero Mines, Ariz..... 130
*Salomon's Balance..... 701
Salt Discoveries in England..... 56
Salt Discoveries in Germany..... 200
Salt Gardens in Arabia..... 219
Salt Industry of Cheshire, England... 729
Salt Lake City Mining Stocks, 17, 58, 84, 109, 136, 176, 202, 254, 280, 320, 346, 398, 438
Salt Lake Stamping & Tinware Co... 312
Salt Mines of Carmen Island..... 226
Salt Rate War..... 250
Salton Salt Co., Cal..... 537
*Sampling Machine, Bridgeman's.... 701
Sampling Ores..... 264
Sampling Ores Without Machinery... 195
Sampson Mg. Co., Utah..... 133
San Antonio Mine, Nuevo Leon..... 16
San Antonio Natural Gas & Oil Co., Texas..... 107
San Bernardo Mines, Ltd., Colo...171, 434, 708
San Carlos Mg. Dist., Tamaulipas.... 16
San Diego Steel Plant, Cal..... 41, 707
San Domingo Reciprocity..... 273, 392
San Francisco Mine, Sonora..... 278
San Francisco Mining Stocks..... Weekly
San Jacinto Estate, Ltd., Cal. 52, 104, 131, 301, 3 3, 365 433, 459, 485, 510, 695, 707
San Juan Mine, Nuevo Leon..... 16
San Lazarus Mine, N. M..... 462
San Luis Potosi Mining News.....134, 600
San Miguel Gold Mg. Co., Colo...695, 697, 721
San Nicolas Mine, Chihuahua..... 108
San Rafael Mg. Co., Hidalgo..... 174
San Salvador Reciprocity with U. S.. 391
San Salvador Shipping Rules..... 12
San Vicente Mines, Sinaloa..... 686
Sand Coulee Coal Co., Mont..... 623
Sandstone Industry of U. S..... 1, 10
Sandstone Quarries in Michigan...94, 165
Sanguist Mg. Claim, Colo..... 131
Santa Barbara Asphalt Co., Cal..... 485
Santa Elena Mine, Chihuahua..... 344
Santa Fé Copper Co., N. M....133, 186, 225, 237, 447, 575
Santa Gertrudis Mg. Co., Pachuca... 344
Santa Juliana Mg. Co., Mex..... 600
Santa Niña Mine, Sonora..... 278
Sapphire & Ruby Co., Mont..... 461, 733
Sapphires in Mont..... 461
Sara B. Mg. & M. Co., Colo..... 197
Saucon Furnace, Pa..... 12
Sault Ste. Marie Canal...230, 356, 457, 458, 465, 713
Saunders' Compressed Air Formulæ.. 48
Saunders, Wm. L.....48, 73, 119, 186
Saunders, Wm. L., on Compressed Air..... 119, 186
Savage Mg. Co., Nev...15, 106, 133, 173, 199, 225, 252, 317, 342, 395, 461, 462, 488, 513, 539, 575, 599, 623, 624, 649, 685, 709, 710
*Saw Set, Taintor..... 127
Sawyer, Alonzo, Death of..... 312
Sayre, Marcus..... 539
Sayre and Vanderhoof Mine, N. J.... 173
Schemmel's August, *How to Make Money Out of Inventions*..... 302
Schnabel, C., on Liquid Fuel in Copper Smelting..... 566
Schnelke's Regenerative Lamp..... 127
Schreib's, H., Soda Crystals..... 96
Schuyler, Geo. & Co..... 57
Schuylkill Anthracite Coal Royalty Co., Pa..... 462
Schuylkill Canal..... 653
Schuylkill Coal Exchange and Miners' Wages..... 55, 277, 539
Schwarz, T. E., Life of..... 239
Schwatka, Lieut..... 52
Scientific Alliance..... 561
Scientific Expedition to Spitzbergen.. 221
Scientific Investigators..... 194
Scientific Meetings in Washington... 244
*Scissors Grinder..... 388
Scotch Mining News..... 253
Scotch Pig Iron Market Review..138, 178, 204, 230, 256, 322, 738
Sectia Mine, Mo..... 648, 709
Scott, W. L..... 272, 338, 364
Scott, W. L., Coal Co. Pa..... 686
Scott Mine, Idaho..... 80
Scottdale Iron & Steel Co., Pa..... 130
Scoville Mfg. Co., Conn..... 247
Scranton, J. R..... 682
Scranton, Selden T., Death of..... 620
Scranton Steel Co..... 322
*Screw Driver, Handy Ratchet..... 386
Seaboard Assn..... 281
Searle, Wm..... 51
Seattle Coal & Iron Co., Wash..... 340
Seattle Coal & Grain Co., Wash..... 15
Secas Flat Mine, Cal..... 365
Second Annual Report of Geological Society of Texas..... 158
Second Geological Survey of Pa..... 472
Secretary of Interior's Decisions Relating to Mining..... 643, 704
Section 33 Iron Mg. Co., Mich..... 172
Section 21 Mine, Mich..... 598
Sedalia Furnace, Colo..... 91
Sedalia Mine, Colo..... 14
Selby Sm. & Refg. Works, Cal..... 707
Sellers Mine, Mo..... 15
Sellers, Wm..... 596
Sellover & Bunker, Ore..... 200

Selwyn's, Arthur R. C., Report on Canadian Geological Survey.... 446
Semi-Monthly Pay Bill Law..... 321
Seminole Hard Rock & Land Co., Fla. 105
Senator Mg. Co., Colo..... 223
Seneca Lead & Zinc Co., Mo..... 251
Seneca Tripoli Mines, Mo..... 276
Separation of the Halogens..... 311
Separator, Edison Magnetic..... 82
*Separator, Hoffman Magnetic..... 680
*Separator, Lovett-Finney..... 588
Serrin's Balance..... 211
Serve Ribbed Boiler Tubes..... 364
Servia and Russian Petroleum..... 336
Servian Mines..... 728
Seven Devils Mine, Idaho..... 315
Seven Devils Mg. Dist., Idaho, 54, 157, 171
Sewage Purification..... 40
Sewerage of Cities..... 446
Seyfert, S. R. & Co..... 169
Shafer Mg. Co., Mich..... 198, 341, 435
* haft Sinking in Quicksands in Mich. 568
Shakespeare Mine, Cal..... 104, 273
Shale Utilized..... 426
Shaler, Prof. N. S..... 484
Shannon Mine, Idaho..... 732
Shannon's Mine, Nev..... 106
Sharon Iron Co., Pa..... 13
Sharon, W. E..... 317
Shasta Gold Extr. Co., Cal..... 573
Shaw Coal Mg. Machine..... 107
Shaw, J. O. vs Quincy Mg. Co..... 315
Shawmut & Glen Hazel Road..... 650
Shearn, J. B..... 312
Sheffield Land Co., Ala..... 79
Sheffield Land, Iron & Coal Co, Ala.. 485
Sheep Mountain Tunnel Mg.Co., Colo. 621
Sheldon Marble Co., Vt..... 489
Shenandoah Mine, Cal..... 459
Shenango Mg. Claim, Colo..... 511
Shenango Valley Steel Co., Pa..... 338
Shepherd, Alex. R., on Free Coinage. 447
Sheridan Mg. Co., Colo..... 345, 393
Sheridan, W. J..... 132, 169
Sheridan & Mendota Cons. Mg. Co., Colo..... 708
Sherwood Mfg. Co..... 643
Shettle, John H..... 396
Shields, C. O..... 197
Shields & Brown Co., Ill..... 51, 103
Ship Canal, Manchester..... 269
Shipping Laws of Peru..... 129
Shohola Glen Quarries, N. Y..... 248
Short Mtn. Colliery, Pa..... 277
*Shortt Duplex Engine..... 337
Shoemaker, A. T..... 338
Shuck Placer Mine, Alaska..... 52
Siamese Trade..... 536
Sicilian Sulphur..... 21, 397, 515
Sieborst, H. G..... 733
*Siemens-Halske Dynamotor..... 356
Sierra Buttes Gold Mg. Co., Cal..249, 365, 510
Sierra Mojada Mines, Coahuila..... 327
Sierra Nevada Mg. Co., Nev..... 133, 732
Silent Friend Mg. Co., Colo..... 14, 274
Silesian Miners..... 239
Silica and Iron..... 304
Silica Discovered in Pa..... 133
Silicon, Reducing Power of..... 305
Silver Age..... 688
Silver and Copper Smelting..... 74, 160
Silver and Gold Imports and Exports 117
Silver and Gold Production, World's 39, 40
Silver Belle Mine, Colo..... 314, 366, 621
Silver Belt Mine, Ariz..... 731
Silver Bow Co., Mont., Mineral Resources..... 709
Silver Bow Mine, Mont..... 199
Silver Bullion Certificates..... Weekly
Silver City Mg & M. Co., N. M..252, 343
Silver City Northern R. R..... 342
Silver City Red. Co., Idaho..... 275, 537
Silver Connor Mine, Nev..... 513
Silver Cord Combination Mg. Co., Colo..... 511
Silver Creek Mg. District, Wash..... 600
Silver Discovery in Ark..... 170
Silver Discovery in Cal..... 52
Silver Discovery in Colo..... 197, 249
Silver Discovery in Idaho..... 14
Silver Discovery in Mont..... 368
Silver Discovery in Nev..... 368
Silver Discovery in Russia..... 134
Silver Discovery in Wales..... 253
Silver Discovery in Wisconsin..... 463
*Silver, Epoch of..... 615
Silver Fields of Tasmania..... 472
Silver Fluoride..... 47
*Silver, Free Coinage of, 1, 8, 39, 40, 41, 52, 53, 55, 66, 67, 76, 157, 158, 160, 166, 186, 237, 263, 303, 328, 329, 362, 421, 446, 447, 471, 472, 497, *498, 523, 525, 564, 587, 610, 635, 671, 672, 673, 698
Silver, Gold Colored..... 640
Silver Key Mine, Utah..... 226, 396
Silver King Mine, B. C..... 16, 108, 134, 576
Silver King Mine, Cal..... 313
Silver King Mine, Colo..... 131, 314
Silver King Mg. Claim, Mont..... 106
Silver King Mg. Co., Ariz., 55, 222, 273, 365, 485, 510, 601, 651, 736
Silver-Lead Ores, Mexican, 53, 65, 91, 226, 327, 344
Silver Ledge Syndicate, Colo..... 275
Silver Maiden Mine, Colo..... 314
Silver Mining in Mongolia..... 335
*Silver Production of U. S., 65, 72, *98, 419
Silver Queen Mg. Claim, B. C..... 134
Silver Queen Mg. Co., Alaska..... 52
Silver Queen Mg. Co., Indian Ty..... 341
Silver Receipts of U. S. Assay Office, N. Y..... Weekly
Silver Refinery Slags, Bismuth in..... 571
Silver Star Mg. Claim, Mont..... 106
Silver West Mine, Nev..... 513
Silverton Railway, Colo..... 104
*Simpson Alkali Process..... 332
Simpson's, J., Caustic Soda Process.. 570
Sinaloa Mining News..... 686
Singapore and American Trade..... 129
Sir Henry Curtis Mine, Mont..... 276
Siskiyou Coal Co., Cal..... 621
Siskiyou Quicksilver Mg. Co., Cal..... 573
Sisterville Oil Field, Ohio..... 734
Situations Wanted..... Weekly
Sixth Biennial Report of Bureau of Labor Statistics of Illinois..... 40
Skagit Coal & Transportation Co., Wash..... 463
Skiff, F. J. V..... 387
Skinner's Walter R., *Mining Manual* 354
Skonska Superfosfatbogalet..... 463
Sky, Blueness of..... 73
Skyline Mine, B. C..... 15, 134, 370
Skyrme, Wm..... 105
*Slads, F. J., Death of..... 449
Slag..... 101
Slag, Martin vs. Thomas..... 450
Slate Deposits in Utah..... 16, 107
Slate Quarries in Pa..... 343
Sleet, Paul B..... 108
Slide Mg. Claim, Colo..... 197
Slide Rules..... 192, 311
Slope Mine, Pa..... 277
Sloss Iron & Steel Co., Ala..... 646
Small Hopes Cons. Mg. Co., Colo., 53, 274, 459, 511, 683
Smelter at Clifton, Utah..... 15
Smelter at Pueblo, Colo..... 314
Smelters in Mont. Closed Down..... 199
Smelting Copper and Silver..... 74
Smelting Industry of Colo..... 183, 573
Smelting Industry of U. S..... 65, 91
Smith, Dr. A. H., on Compressed Air. 119
Smith, Richard, Death of..... 247
Smith, Sam'l E., Death of..... 364
Smith, W. H..... 200
Smith, Willoughby, Death of..... 129
Smith's, E. A., Report on Ala. Geological Survey..... 472
Smith's, J. B., *Treatise Upon Wire*, 210, 236
*Smith's Pipe Tapping Apparatus..... 595
Smoke Nuisance at Butte, Mont 247, 733
Smokeless Powder..... 500
Smuggler Mg. Co., Colo..... 170, 314
Smuggler-Union Mg. Co., Colo., 80, 314, 597
Snell, Geo., Death of..... 312
Snow, C. A. & Co..... 509
Snow Flake Mg. Claim, Colo..... 104
Snow Flake Mg. Co., Utah..... 318
Snyder Bros., Mo..... 54
Soapstone Quarry in Conn..... 171
Société Anonyme De Metallurgie De Cuivre on Manhes Copper Process. 610
Société Anonyme des Mines de Lexington, Mont..... 132, 231, 393, 456, 646
Société d'encouragement pour l'industrie National on Metallurgy of Steel..... 268
Société des Metaux..... 230, 654
Societies..... Weekly
Society, American Chemical, 221, 244, 645, 730
Society, Colorado Scientific..... 364
Society for Encouragement of Nat'l Industry of France..... 221
Society of Civil Engrs., American..... 484
Society of Civil Engrs., Denver..... 12
Society of Mech. Engrs., American. 4, 391, 509, 594
Soda Crystals Manufacture..... 96
Soda Statistics..... 201, 279, 437, 577, 651
Sodium Aluminate, Analysis of..... 501
*Sodium Light..... 75
Sodium Manganates..... 386
*Sodium Process..... 533
Soldier Mg. Dist., Idaho..... 249
Soldering Iron with Nickel..... 390
Soledad Mine, Hidalgo..... 174
Solid Muldoon Mine, Utah..... 82
Solvay Process Co., N. Y..... 535
Somers Bros., N. Y..... 458
Song Bird Mg. Claim, Colo..... 104
Sonora Mg. News..... 174, 226, 278, 344, 686
Soo Paper Co., N. Y..... 457
Sosa, Pedro J..... 432
Sopresa Mine, Hidalgo..... 174
Soukop Mg. Claim, Wash..... 576
South African Diamond Mine..... 330, 481
South African Mining News, 56, 253, 278, 318, 344, 463, 687
South America and American Goods. 129
South American Mg., Why It Fails.... 644
South American Mining News..... 56
South American Trade..... 273, 391
South Australian Mining News..... 57
South Boston Iron Works..... 79
South Carolina Mining News..... 107, 343
South Carolina Phosphate Lands..57, 107
South Dakota Minining News, 15, 55, 82, 107, 133, 174, 200, 225, 252, 317, 343, 396, 462, 488, 600, 624, 711
South Eureka Mg. Co., Cal..... 393
South Galena Mg. Co., Utah..... 82, 174
South Homestake Mine, N. M..... 82, 343
South Joplin Mg. Co., Mo..... 198, 316
South Mastodon Mine, Mich..... 80, 435
South Peacock Mg. Claim, Idaho..... 315
South Penn Oil Co., W. Va..... 56, 313
Southern Belle Mine, N. C..... 686
Southern Birmingham G. & I. Co., Ala. 459
Southern Coal Fields..... 167
Southern Cross Mine, Mont..... 80
Southern Equipment Co..... 222, 312
Southern Granite & Marble Co., Va.. 344
Southern Industrial Notes, 52, 103, 248, 364, 485, 510
Southern Interstate Immigration Assn..... 273
Southern Nevada Mg. Co. vs. Holmes Mg. Co., Nev..... 709
Southwest Natural Gas Co., Pa..... 332
Southwest Silver Convention..... 457
Southwestern Coal & Iron Co., N. M. 575
Spain Needs Agricultural Implements..... 12
Spang Steel & Iron Co., Pa..... 78
Spanish-American Transportation Co. 536
Spanish Gold Mg. Co., Cal..... 597
Spanish Mining News, 57, 201, 344, 463, 515, 600
Spanish Phosphate Lands..... 57, 463
Spanish Ranch Mg. Dist., Cal..... 131
*Spartan Wrench..... 123
Spaulding, H. C., on Electric Power.. 594
Spaulding, H. C., on Electric Locomotives..... 424
Spear, Col. V. K..... 169
Special Inquiry Into the Zone Railway System..... 40
*Specific Gravity of Liquids..... 701
Spectacle Lenses, Mfr. of..... 306
*Speed Indicator, Church's..... 120
Speed of Electric Currents..... 126
Spelter Industry of U. S..... 39, 45
Spelter Market Review..... Weekly
Spencer's, Adam, *Roll Turning for Sections in Steel and Iron*..... 634
Spiegeleisen and Ferro Manganese Market Review..... Weekly
Spilsbury, F. G., on Cable Hoists..... 424
Spokane Hydraulic Co., Idaho..... 311
Spokane Mine, S. Dak..... 225
Spokane Silver Dist, S. Dak..... 343
Spokane & Gt. Northern Mg. Co., Wash..... 650, 735
Spontaneous Combustion in Coal Cargoes..... 679
*Spontaneous Ignition of Coal..... 306
Spotswood, Geo. A., on Canadian Apatite Mining..... 635
Springdale Mines, Colo..... 14
Springfield Iron Co. vs. Carbon Iron Co..... 169
Spur Mine, Mich..... 315
Spur Mg. Claim, Colo..... 197
*Square and Mitre, Fox's..... 533
S. Small Mine, Colo..... 459, 486
Stackhouse, Powell..... 706
Stadacona Silver Copper Mg. Co., B. C..... 134, 435
"Staff" for World's Fair Bldgs..... 48
Stahl's, Dr. W., Cobalt Process..... 424
Standard Boiler & Bridge Co., O..... 103
Standard Chemical Co., N. Y..... 78
Standard Coal Co., Ala..... 13
Standard Cons. Mg. Co., Ariz..... 55
Standard Cons. Mg. Co., Cal., 52, 131, 197, 249, 279, 365, 621
Standard Lead & Zinc Co., Mo..... 341
Standard Mine, Idaho..... 315
Standard Mg. Co., Colo..... 170, 314
Standard Oil Co., 9, 26, 78, 84, 166, 169, 273, 343, 364, 396, 458, 491, 539, 576, 624
Standard Phosphate Co., Fla..... 223
Standard Phosphate & Chem. Co., Fla 647
Standard Plate Glass Works, Pa..... 201
*Standard Storehouse Construction.. 358
Standard Thermometers..... 4
Stanley Furnace & Land Co., Va..... 711
Stanley Mine, Cal..... 249
*Stanton, John..... 80, 131, *331, 432
Star Lead & Zinc Co., Mo..... 132
Star Mine, Colo..... 683
Star of Hope Mg. Co., Colo..... 597, 647
Starling Mine, Ore..... 167
Star's Transit..... 75, 360
State and Federal Government in Switzerland..... 236
State Line Mg. Co., Nev..... 461
State of S. C. vs. Coosaw Mg. Co..... 175
Statistics, Use of..... 191
*Steam Engine, Ammonia..... 51, *101, 445
Steam Engine Economy..... 594
*Steam Engine Indicator, Perry's..... 46
Steam Engine Manual..... 262, 354
Steam Engineering Bureau's Report, 158, 262
*Steam Jet Exhauster, Tilghman..... 362
Steamboat of Aluminum..... 220
Steamship Lines Between Aspinwall and U. S..... 536
Steamship Line Between Mexico and U. S..... 272, 536
Steamship Line Between West Indies and U. S..... 272
*Steel and Iron, Carbon in..... *68, 235
Steel and Iron, Corrosion of..... 46
Steel and Iron Exports of U. S..... 12
Steel and Iron Production of U. S..92, 101
Steel and Iron Tests..... 423
Steel and Iron Workers' Amal. Assn., 13, 19, 20, 78, 86, 103, 129, 130, 169, 247, 273, 364, 645
Steel, Cast, Projectiles..... 263
*Steel Cutting Pivers..... 268
Steel, Elasticity of..... 270
Steel Girders in Mines..... 102
Steel Guns for the Govt., New..... 79
*Steel, Low, Used in R'way Bridges, 671, * 678, *702
*Steel, Manganese..... 216
Steel, New Fluid for Coloring..... 638
Steel Plant at Allentown, Pa..... 338
Steel Plant at Birmingham, Ala..... 169
Steel Plant at San Diego, Cal..... 41, 707
Steel Production of U. S..... 528
Steel Rail Market Review..... Weekly
Steel Rails, German..... 261
Steel Rails Loose in Structure..... 676
Steel Rails, 95-pound..... 39
Steel Railway Sleepers..... 128
Steel Shaving, a Long..... 530
*Steel Tired vs. Chilled Cast Iron Wheels..... 93
Steel Workers' Strike in Pa..... 138, 247
Steel Worker' Wages in Pa..... 434
Steel Works Club..... 682
Steele, Oscar, vs. Brown, Fox *et al*..81, 106
Steinman's, Dr., Geological Map of So. America..... 247
Stella Mine, Mont..... 15, 487
Stemwinder Mine, Idaho..... 366, 648
*Stephens' Patent Vice..... 532
Sterling Lead & Zinc Co., Miss..... 598
Sternberger, L..... 312
Stetefeldt, C. H..... 509
Stettin-American Import & Storage Co., Germany..... 273
Stevens, J. A. K..... 51
Stevens Mine, Colo..... 53
Stewart, David, Death of..... 103
Stewart Iron Co..... 706
Stewart vs Lyon, Utah..... 277
Stewart Wm. M., on Silver Question, 8, 39, 66, 76, 160, 166, 328, 362, 471, 472
Stickenberger, Prof., on Petroleum.. 705
Stickney's, A. B., *Railway Problem*, 92, 210
Stillwell Mg. Co., Mo..... 461
Stilwell & Bierce Mfg. Co., O..... 129
Stock Gambling in California..... 3, 319
Stock Quotations, Coal, Mining, Pipe Line Certificate, Trust..... Weekly
Stockton Gas Co., Cal..... 459
Stoddard Mine, Idaho..... 105, 223
*Stoker, Mechanical..... 242, 361
Stokes on Miner's Eyesight..... 77
Stone Coal in Lead Blast Furnaces.... 162
Stone Quarries in Wisconsin..... 711
Stones for Building and Decorating. 354
Stonewall Mine, Cal..... 274, 365
Storms, W. N., on Steel Works at San Diego..... 41
Stormy Hill Mine, Idaho..... 223
Stowell, Charles F..... 51
Stranathan Phosphate Co., Fla..... 460
Streets and Highways in Foreign Countries..... 610
Strength of Delta Metal and Copper Wire..... 127
Strength of Materials Used in Construction..... 185
Strickland, J. H..... 132
Strike of Axe Workers..... 273
Strike of Bricklayers in Neb..... 175
Strike of Bricklayers in N. Y..... 227
Strike of Coal Miners in Belgium, 56, 226
Strike of Coal Miners in B. C..... 651
Strike of Coal Miners in Colo..... 707, 732
Strike of Coal Miners in France..600, 725
Strike of Coal Miners in Ill., 105, 250, 315
Strike of Coal Miners in Ind., 14, 574, 732
Strike of Coal Miners in Iowa..... 598
Strike of Coal Miners in Kans..... 434
Strike of Coal Miners in N. M..... 55
Strike of Coal Miners in Ohio, 15, 106, 317, 396
Strike of Coal Miners in Pa.. 107, 133, 317, 370, 396, 462, 488, 513, 539
Strike of Coal Miners in Tenn. 104, 133, 318
Strike of Coal Miners in Wash..... 15, 108
Strike of Coal Miners in W. Va..... 344
Strike of Coke Workers in Pa..... 343, 513
Strike of Furnacemen in Pa..... 392
Strike of Glass Workers in Pa..... 175
Strike of Granite Cutters in Conn.... 201
Strike of Iron Workers..... 13, 19, 20, 86
Strike of Lead Smelters in Neb., 178, 199, 204, 222, 248
Strike of Lumber Handlers in N. B., 21, 57, 83, 109
Strike of Nail Men in England..... 221
Strike of Slaters in Pa..... 201
Strike of Steel Workers in Pa.... 138, 247
*Strowbach's Wire Rope Holder..... 336
Strontianite Mines in Germany..... 474
Stuckey, S. A..... 54
Structural Iron and Steel Market Review, 283, 322, 348, 374, 400, 440, 466, 492, 518, 544, 580, 604
Structural Material Market Review, 19, 60, 86, 112, 138, 178, 204, 230, 256, 629, 655, 690, 714, 739
Sturtevant Mill Co..... 509
Subways, Electrical..... 137
Suddeth vs. East Tenn., Va. & Ga., R. R..... 50
Suez Canal..... 101
Suhr, H..... 364
Sullivan Mine, Idaho..... 99
Sulphate of Potash, Prices for, 1892... 711
Sulphur Deposits in the West..1, 340, 396, 586
*Sulphur Eliminated from Iron..... 592
Sulphur Impressions..... 193
Sulphur in Coal and Coke..... 50
Sulphur in Iron and Steel..... 640
Sulphur Used to Heat Glass..... 4
Sullivan, Daniel S., Death of..... 196
Sullivan & Wilson Mines, Mont..... 435
Sulphuret Mine, Ariz..... 313
Sulphuric Acid Concentration..... 191
Sulphuric Acid, Electrolysis of..... 77
Sulphuric Acid, Safe Shipment of..... 246
Summit Mine, Cal..... 339, 621
Summit Mine, Mont..... 342
Summit Mine, Wash..... 650
Summit Mg. Claim, Colo..... 314
Sun, Spots on..... 192
Sundown Mine, Utah..... 306, 343
Sunk Mines, N. Y..... 82
Sunrise Mine, Utah..... 306
Sunshine Mine, Colo..... 314
Sunnyside Mine, B. C..... 15, 134
Sunnyside Mg. Claim, Mont..... 198
Superior Gold & Silver Co., Mich. 119, 434
Superior Mg. Co., Mich..... 435
Surgery and Electro-Magnet..... 189
Surpless, Dunn & Aider..... 643
Survey of Pacific Coast..... 46
Survey of the Lakes..... 457
Susquehanna Chemical Co.'s Works on Fire..... 651
Susquehanna Coal Co., Pa..... 575
Sutherland, Col. W. J..... 15, 484
Sutton Mine, Cal..... 131
Swallow's, G. C., *Report on Mont. Mines*..... 66
Swanzey Mine, Mich..... 172
Swarts, W. P..... 338
Swedish Mining News..... 279, 463
Swedish Peat Industry..... 636
Swift's Iron & Steel Works, Ky..... 458
Swindell, Wm., Death of..... 391
Swiss Glaciers, Age of..... 681
Swiss Government..... 236
Sylvanite Mine, Colo..... 249, 393
Syndicate Mine, Cal..... 365
Systematic Mineralogy..... 563

T.

Tables for Determination of Minerals by Physical Properties..... 159
Tables of Analyses of Clays, etc..... 262
Tacoma Sm. & Ref. Co., Wash..... 514
*Taintor Saw Set..... 127

Takashima Coal Mines, Japan..... 600
Taku Cons. M. Co., Alaska..... 52
Talisman Mg. Co., Cal..... 339
Tam O'Shanter Mine, B. C..... 134, 515
Tam O'Shanter Mine, Colo., 53, 314, 460, 597, 735
Tamarack, Jr., Mg. Co., Mich., 275, 367, 434, 511, 538, 574, 643
Tamarack Mg. Co., Mich., 14, 54, 194, 275, 394, 434, 538, 684
Tamarack-Osceola Copper Mfg. Co., Mich..... 54, 132
Tamaulipas Mining News..... 16
Tank Steamers..... 620
Tar Converted Into Gas..... 388
Tariff Bill, McKinley..... 91
Tariff, Mexican..... 392, 646
Tariff on Bituminous Coal..... 157
Tariff on Lead Ore..... 65
Tariff on Lead Amended..... 138
Tasmanian Silver Fields..... 47
Tawresey, John G..... 12
Tax Reform..... 609, 620
Taxes in Pa. Appealed Against..... 252
Taylor, Chas. E..... 78, 312, 706
Taylor, Geo. W..... 197
Taylor Iron Works, N. J..... 103, 248
Taylor, Matthew..... 457
Taylor & Brunton, Utah..... 169, 597
Taylor & Co., O..... 130
Tazewell Barytes Mills, Va..... 174
Teal, Geo., Death of..... 645
Teal & Adams Mine, Ga..... 165
Tecumseh Mg. Co., Mich..... 54, 434
Teel & Poe Mg. Co., N. M..... 103, 317
Telegraph G. & S. Mg. & M. Co., Cal. 131
Telephone in Mines..... 123
Telescope for Stadia Work, Hand..... 422
Temescal Mines, Cal..... 301
Temperature in Blast Furnace..... 220
Temperature Influenced by Forests.. 76
Tenderfoot Mg. Claim, B. C..... 134, 370
Tennessee Coal Mg. Co., Tenn..... 133, 252
Tennessee Coal Fields..... 167
Tennessee C., I. & R. R. Co., 13, 52, 79, 104, 169, 313, 458, 485, 606, 711, 713
Tennessee Mining News, 107, 133, 225, 252, 317, 343, 370, 396, 462, 540, 576, 600, 624, 650, 711
Tepustete Mine, Cal..... 707
Tetro Mg. Co., Utah..... 318
Terhune, R. H., on Ontario Mine..... 524
Terne, Dr. Bruno, on Coke Mfr..... 610
Terrible Mg. Co., Colo..... 537
Terrorite, a New Explosive..... 361
Testing System of Wm. G. Kirkaldy. 185
Texas Con. Mine, Cal..... 707
Texas Mining News, 82, 107, 290, 489, 686, 774
Thacher, W. A..... 51
Thames Water Tunnel, New..... 93
Theoretical and Practical Treatise on Mfr. of Sulphuric Acid..... 380
Thermometers Rise and Fall in..... 594
Thermometers, Standard..... 4
Thermometric Scale, New..... 334
Thomas, Darius, Death of..... 703
Thomas, E. E..... 53
Thomas Iron Co., Pa..... 12, 78, 178
Thomas, Sidney Gilchrist..... 159
*Thomas Steel..... *702, 724
Thomas vs. Martin Slag..... 450
Thomaston Colliery, Pa..... 55
Thompson, A. H..... 278
Thompson Mg. Claim, Colo..... 104
Thompson & Co., England..... 336
Thompson & Kellogg..... 131
Thompson's, E. P., *How to Make Inventions*..... 524
Thompson's, T., Electro-Magnet..... 189
Thomson, A. R..... 535
Thomson, Edgar, Steel Works. 338, 392, 484, 620
Thomson-Houston Elec. Co., Mass. 51, 364
*Thomson-Van Depoele Arc. Coal Cutter..... 677
Thor Mg. Claim, B. C..... 134
Thorburn, J., on Discovery of So. African Diamond Fields..... 481
*Thorner's Process..... 68
Thornhill, John L..... 108
Three Americas Co., Mass..... 129
Thurston, Robt. H., ... 235, 272, 354
Thurston's, Robt. H., *Manual of the Steam Engine*..... 262, 354
Tiger Mine, Idaho..... 393, 538, 732
Tiger Mg. Co., Ariz..... 313, 731
*Tilghman Steam Jet Exhauster..... 362
Tilly, Geo..... 572
Tilt Cove Copper Co., Ltd., Newfoundland,..... 278
Tilton Mg. & Development Co., Wyo. 651
Timber Stealing in Mont..... 199
Timber Tests by U. S. Gov't..... 423
Tin Cup Mg. Claim, Colo..... 314
Tin Discovery in China..... 437
Tin Discoveries in Spain..... 600
Tin in Australia..... 271
Tin in Burmah..... 674
Tin in California, 52, 104, 131, 273, 301, 339, 365, 433, 459, 485, 510, 597, 695, 710
Tin in Victoria..... 9
Tin Market Review..... Weekly
Tin Ore Analysis..... 727
Tin Oxide, a New..... 238
Tin Plate Industry in England, 12, 130, 391
Tin Plate Industry in U. S., 247, 432, 672, 676
Tin Plate Mfr., History of..... 120
Tin Plate Works in Wales..... 620
*Tingman, J. H. and Comstock Mill Ring..... 3, 211, 498, 525, *721
Tingman, J. H., on Free Coinage, 263, 636
Tintic Iron Co., Utah..... 396
Titcombe, John S..... 12
Todd, J. E..... 51
Todd Mine, Ore..... 563
Todos Santos Mine, Tamaulipas..... 16
Tombstone Mill & Mg. Co., Ariz. 313, 537
Tomkinson's Annealing Furnace..... 263
*Tommassi Accumulator..... 643
Tonawanda Iron & Steel Co., N. Y... 78
Top Hand Mine, Mont..... 15
Top Mg. Claim, B. C..... 134
Topeka Mine, Colo..... 537
Totten & Hogg Iron & Steel Foundry 682
Toughnut Mine, Ariz..... 313
Tower at World's Fair and Amer. Engrs..... 247
*Tower Pocket Level..... 388
*Tower & Lyons, N. Y..... *308, *388, 532
Townsend Edward Y., Death of..... 535
Trade Dollar Mg. Co., Idaho. 80, 223, 249, 315
Trainer, Chas. W. & Co., Mass..... 51, 103
Transition Curve Field Book..... 328
Trans-Pacific Cable..... 187
Transvaal Gold Mines..... 67, 353
Transvaal Mining News..... 56
Transylvania Mining News..... 686
Traube, Prof., on Electrolysis of Sulphuric Acid..... 77
Treadway, F. S..... 198
Treasure Hill Mg. Co., Mont..... 54
Treatise on the Calkins Steam Engine Indicator..... 66
Treatise upon Wire..... 210, 236
Trefoil Gold Mg. Co., Ga..... 683
Tregloan, J. R., Cal..... 339
Trembo Mine, Colo..... 537
Trenholm, Paul C., 83, 227, 345, 371, 461, 601
Trenton Iron Co..... 169
Treweek, N..... 78, 82, 596
Trinity Gold & Mining Co., Cal..... 170
Tripoli and Mineral Black..... 74
Tripoli Mines in Missouri..... 276
Tripp, Col. Ira, Death of..... 169
Trippel, Alex..... 391
Trouvelot, M., on Sun Spots..... 192
Trumbo, Isaac..... 391
Trussville Furnace, Ala..... 312
Trust, Barbed Wire..... 130
Trust, Collateral Car..... 52
Trust, Lead..... 130, 248, 322, 518
Trust Stocks..... Weekly
Tube Works at Duluth, Minn..... 78
Tubes and Pipes, Market Review. Weekly
*Tucker, C. H. & Bro..... 309
Tuckahoe Mine, Ariz..... 731
Tuerto Mountain Copper & Gold Co., N. M..... 199, 395
Tumucacori Silver Mine, Sonora..... 278
Tunis Phosphates..... 614
*Tunnel, Hudson River..... 73
Tunnel in Big Cañon, Cal..... 131
Tunnel, St. Clair..... 255, 338, 390, 620
Tunnel, Thames Water..... 93
Tunnels Under Clyde River..... 336
Tunner, P., on Desulphurizing Molten Cast Iron..... 211
Turkey to Mfr. Portland Cement..... 363
Turnbull, Stewart & Co..... 272
Turquoise Deposits in N. Mo..... 342
Turquoise Mine in Russia..... 564
Tuscaloosa Coal, Iron & Land Co., Ala..... 485
Tuscarora Water Co., Nev..... 132
Tuggle-Ellis Mg. Co., Ala..... 683
*Tuyere, Langdon..... 526
Two-Weeks Pay Law in Pa..... 277
Tyler, Sir Henry..... 222

U

Ultramarine Industry of Germany... 77
Uncle Sam Mine, Cal..... 365
Union Blue Stone Co., N. Y..... 248
Union Bridge Co., Pa..... 51
Union Carbonate Mines, Colo..... 14, 647
Union Coal Co., Colo..... 647
Union Coal Co. vs. City of La Salle, Ill. 168
Union Concentrating Co., Utah..... 489
Union Cons. Mg. Co., Colo..... 80
Union Cons. Mg. Co., Nev..... 132
Union Iron Works, N. Y..... 59
Union Mill, Nev..... 15
Union Mine, Cal..... 79, 597
Union Mine, Idaho..... 538, 648, 732
Union Pacific Coal Co., Wyo., 15, 108, 134, 318
Union Rolling Mill Co., O..... 13
Union Tin Plate Co., Pa..... 509
United Alkali Co..... 332
United Coal Co., Colo..... 197
United Mine Workers' Assn. 317, 436, 689
United Mg. Claim, B. C..... 108
United Mg. Co., Mich..... 648
United Sm. & Ref. Co., Mont..... 394
U. S. and Brazil, Cable Line Between 12
U. S. Asbestos Production..... 270
U. S. Assn. of Charcoal Iron Workers 221
U. S. Bills Too Long..... 610
U. S. Bonds, 4½%..... 19
U. S. Bread Stuffs Exports..... 338
U. S. Coal Exports..... 627
U.S. Commission of Fish & Fisheries 498
U. S. Copper Production..... 379, 381
U. S. Dept. of Agriculture..... 610
U. S. Exports and Imports of Gold and Silver..... 117
U. S. Exports of Mg. Machinery to Japan..... 272
U. S. Fluorspar Production..... 240
U. S. Geological Survey. 272, 278, 422, 725
U. S. German Silver Industry..... 47
U. S. Glass Co..... 78, 130
U. S. Gold Exports and Imports. 235, 523
U. S. Graphite Co..... 780
U. S. Graphite Production..... 431
U. S. Imports and Exports..... 392
U. S. Imports from Germany..... 272
U. S. Infusorial Earth Production.... 212
U. S. Internal Commerce..... 92
U. S. Iron Production..... 92, 101, 445, 454
U. S. Lead and Zinc Industry..... 39, 45
U. S. Mine Supply Co., O..... 509
U. S. Mining Law..... 419, 421, 562, 564
U. S. Mint Coinage, 19, 178, 282, 400, 544, 654
U. S. Navy's Engineer Force..... 361
U. S. Ozokerite Production..... 127
U. S. Phosphate Co., Fla..... 333
U. S. Pig Iron Production..... 118, 471
U. S. Railroads..... 328
U. S. Rolling Mill Stock Co., Ala..... 52
U. S. Sandstone Industry..... 10
*U. S. Silver Production..... 65, 72, *98, 419
U. S. Smelting Industry..... 65
U. S. Spelter Industry..... 39, 45
U. S. Steel Production..... 528
U. S. Tin Plate Industry..... 432, 672, 676
U. S. Trade with Brazil..... 389
U. S. Trade with Chili..... 392
U. S. Trade with Siam..... 536
U. S. Trade with So. America..... 391
U. S. Trade with Uruguay..... 536
United Verde Mine, Ariz..... 731
University of Arizona..... 433
Upham, Warren, on How Mountains Were Made..... 311
Uranium in Black Hills, S. Dak..... 75
Uruguay Trade..... 536
Utah Mine, Utah..... 15, 200, 540
Utah Mining News, 15, 56, 82, 107, 133, 174, 200, 225, 252, 277, 318, 343, 370, 396, 436, 462, 489, 514, 540, 576, 600, 624, 650, 686, 711, 734
Ute & Ulay Mines, Ltd., Colo., 53, 170, 340
Utica Mine, Colo..... 53, 197, 486
Utilizing Zinc-Blende Fume..... 565

V

Vallecillo Extension Mine, Nuevo Leon..... 16
Valentine Mg. Claim, Colo..... 105
Valley Engine & Machine Co..... 364
Valley Iron Works..... 392
Valley Mg. Claim, Colo..... 170
Valley Nail Mill, Ill..... 78
Valuation of Counties in Mich..... 367
Valuation of Mines in Ariz..... 339
Valuation of Mines in Mich..... 224
*Valve, Back-Pressure Relief..... 533
Van Courtlandt, E. N..... 129
*Van Depoele Solenoid Coal Cutter.. 245
Van Hise, C. R..... 645
Van Ness, Wm. W..... 364
*Van Zandt, F. S., Life of..... 187
Vanadium Discovery in Argentina... 633
Vandergrift vs. Agerter, Pa..... 306
Vansant, Wm..... 12
Vauxhall & Southwark Water Co., England..... 93
Venetia Boy Mine, B. C..... 436
Venezuelan Gold Production..... 97
Venezuelan, Reciprocity..... 12, 103
Ventilators, Centrifugal..... 424
Vermont Copper Mines..... 6
Vermont Marble Co., Vt..... 489
Vermont Mineral Production..... 677
Vermont Mining News..... 56, 174, 489
Versailles Fuel Gas Co., Pa..... 686
Victoria Mine, Colo..... 197, 485
Victoria Mine, Ga..... 434
Victoria Mg. Dist., Wyo..... 134
Victorian Mineral Production..... 633
Victorian Mines..... 9, 246, 271
Vieille Montagne Co., Belgium..... 368
Vienna Mg. Co., Idaho..... 314
Vincent's, J. M., *State and Federal Government in Switzerland*..... 236
Virginia Coal Fields..... 168
Virginia-Florida Phosphate Co., Fla.. 393
Virginia Miners' Union, Nev..... 106
Virginia Mining News, 107, 174, 226, 344, 463, 514, 576, 600, 650, 711
Virginia Mg. & Ind. Co., Va..... 576, 650
Virginia Steel & Slate Co..... 600
Virginia & Ala. Coal Co., Ala..... 485
Virginia & Gold Hill Water Co., Nev., 199, 488
Virginia & N. C. Copper Co., N. C.... 55
Virginius Mg. & M. Co., Colo..... 223
Virtue Mine, Ore..... 710
*Vise, Stephen's Patent..... 532
Vitriol, Purification of..... 168
Vivian, Johnson..... 14, 105, 367, 645, 733
Volcano Diamond & Gold Mg. Co., Cal..... 104
Voiret's Mineral Black..... 74
Volens Mg. Co., Colo..... 249
Von Petersdorf, C. F..... 391
*Von Reis' Process..... 68
Von Rosenberg, Leo, on U. S. Bills... 610

W

*Wadsworth, Marshman E., Life of.. 613
Wages Determined by Schuylkill Coal Exchange, Pa..... 55, 277, 539
Wages of Coal Miners in England.... 56
Wages of Coal Miners in Ind..... 511
Wages of Coal Miners in Pa.... 82, 107, 173, 203, 252, 321, 369, 539
Wages of Furnacemen in O..... 457
Wages of Iron Workers in Pa..... 236
Wages of Miners in Nev..... 461, 599
Wages of Miners in S. Dak..... 55
Wages of Steel Workers in Pa..... 484
Wages of Workmen at Homestead Mills, Pa..... 706
Wagner Mine, Mich..... 598
*Wagon Bearings..... 75
Wagon Roads Needed in Idaho..... 621
Walker, A. L..... 170
Walker, J. B..... 247
Walker Mfg. Co., O..... 509
Walker Mines, Cal..... 573
Walker Mines, Ga..... 683
Waller, Wm. G., Death of..... 12
Wallower, E. Z..... 312
Walton, H. E..... 364
War Dance Mine, Idaho..... 131
War Eagle Mine, Idaho..... 538
War Eagle Mine, Wash..... 650, 734
Ward, Prof..... 484
Warner, Henry C., Death of..... 572
Warren, H. N., on Silicon..... 305
Warren, W. & J..... 78
Warrington, M. R..... 244
Wartha's, Prof., Nickel and Iron Compounds..... 128
Wasatch Mg. Claim, Utah..... 200
Washburn Mg. Claim, Colo..... 105
Washington Mine, Cal..... 459, 597
Washington Mine, Idaho..... 131, 314
Washington Mg. Claim, Colo..... 314
Washington Mining News. 15, 108, 134, 174, 200, 226, 278, 344, 370, 396, 436, 463, 514, 540, 576, 600, 625, 650, 734
Washington Refg. Co., Pa..... 225
Washington Zinc Co., Va..... 463
Waste Glass, New Use for..... 50
Watch as a Compass..... 677
Water Finder, Heerdegen..... 51
*Water Hoisting Tanks..... 530
Water Measurements of U. S. Geol. Survey..... 422
Water Power, Value of..... 594
Water-Tight Coatings for Buildings.. 727
Water Tunnel, Thames..... 93
Waters, J. H. Ernest..... 213, 221, 683
Watson, Jos. W..... 274
Watson & Gibson on Pipe Line Certificates..... Weekly
Watsontown Mines, Pa..... 488
Watt, Alex., on Belmore Process..... 238
Waukegan Iron & Steel Castings Co., Ill..... 333
Waverly Gold Mg. Co., Ga..... 340
Waverly Mg. Co., Mont..... 54
Weaver, Getz & Co..... 645
Weaver, John J., Death of..... 103
Webster, Camp & Lane Machine Co.. 682
Weddings, Dr. H., on Loose Structure of Rails..... 676
Weeden, Wm. N., Death of..... 129
Weekly Payment Laws of Illinois.. 14, 105
Weights and Measures, Hannssen's.. 127
Weihe, Wm..... 645
Weir, John..... 130
Wekiva & Withcoloochee Land Co., Fla..... 486
Welcome Mg. Co., S. Dak..... 343
Welding Process, Bevington..... 698
Weldon Mg. Co., Ariz..... 52, 222, 365
*Weldon, N. J., Magnetic Iron Ore Plant..... 588
Well at Wheeling, W. Va., Mile-deep 11
Wellington Colliery, B. C..... 278, 651
Wells, E. H..... 13
Wells, J. S. C., on Tin Ore Analysis, etc..... 727
Wells, Michael H., Death of..... 103
Welsh Coal Mines, Depth of..... 337
Welsh, John..... 344
Welsh Mining News..... 134, 253
Welsh Tinplate Mfrs. Coming to America..... 247
Welsh, John..... 344
Welsh Tinplate Works..... 12, 130
Wendigo Copper Co., Mich..... 367, 434, 622, 708
Wendt, Arthur F..... 572
Wenstrom Dynamo Co., Md..... 221
Wesling vs. Kroll..... 100
West Cons. Va. Mg. Co., Nev.. 81, 106 199, 252, 317, 462, 513
West End Rolling Mills, Pa..... 13, 247
West Hamburg Rolling Mill, Pa..... 130
West Indies Wants American Goods. 272
West Kootanie Mg. Dist., B. C.. 15, 108 370, 576
West Kootenay Mg. Co., B. C..... 134
West Lehigh Mine, Pa..... 734
West Newton Mine, Pa..... 575
West Side Mine, Ariz..... 313
West Stanley Colliery, England..... 108
West Virginia Central & Pittsburg R. R..... 108
West Virginia Coal Fields..... 167
West Virginia Flint Glass Bottle Co. 103
West Virginia Mining News, 15, 56, 108, 134, 174, 226, 253, 318, 344, 514, 576, 650, 686
West, Wm., Death of..... 391
Western Coal Freights..... 59
Western Freight Assn..... 18
Western Minor Mineral Industries.. 1
Western Traffic Assn..... 18, 204, 321, 339
Westinghouse Air Brake Co., Pa. 169, 432
Westinghouse Elec. & Mfg. Co., Pa., 78, 392, 432 645
Westmoreland & Cambria Oil Co., Pa 133
Weston, E. W., Death of..... 596
*Weston, W., on Yankee Girl Ore Belt, Colo..... 162
Westphalian Coal Mines..... 46, 187
Westphalian Union, Germany..... 481
Wetmore, Geo..... 576
Wetzel, Theo., Jr..... 484
Wetzler's, J., *Electric Motor*, etc..... 262
Whale Mg. Co., Colo..... 14, 486
Wheeler Condenser & Engineering Co..... 432
Wheeler, H. A..... 51
*Wheels Steel-Tired vs. Cast Iron.... 93
*Whetstone Holder, Frasse..... 533
White Cap Mine, Colo..... 80, 274
White Elephant Zinc Co., Mo..... 54, 435
White Lead Manufacture..... 348
White Lead Process, MacIvor's..... 681
White, Peter..... 621
White, Prof. H. C..... 509
White Quail Mine, Colo..... 14
*White's Air Bath..... 75
Whitewater Mine, B. C..... 108, 437, 576
Whiting's, Harold, *Course of Experiments in Physical Measurements*, 302, 472
Whiting's, S. B., Rope System..... 367
Whittaker Iron Co., W. Va..... 13
Whittaker Phosphate Co., Fla..... 197
*Wiborgh's Process..... 68
Wicks, H. S..... 172
*Wiebusch & Hilger, N. Y. 127, *268, 533
Wilbur Mine, Mont..... 435
Wild Cat Mine, B. C..... 56, 108
Wild Cat Mine, Mo..... 341
Wild, Edw. A., Death of..... 312
Wild West Mine, Idaho..... 14
Wildman Gold Mg. Co., Cal..... 13
Wiley, H. W., on Florida Phosphates 586
Wilford, J. B., Death of..... 620
Wilkes Barre Mg. Claim, Colo..... 197

Wilkeson Coal Co., Wash..... 396
Wilkin Mfg. Co., Wis..... 129
Wilkin, Theo. L 129
Williams, Capt. James..... 572
Williams' Copying Bath..... 271
Williams, Evan..... 649, 685, 709
Williams', F. H., Corrosion Tests..... 46
Williams, G. M..... 82
Williams, J. F., Death of..... 572
Williams Mine, Cal..... 365
Williams Type Writer Co., N. Y..... 221
Williams, Wm..... 247
Willoughby Mine, Alaska..... 52
Willows Copper Syndicate, Ltd., S.A. 74, 160
Wills, J. Lainson..... 620
Willson, T. E., on Free Silver Coinage, 329, 421
*Wilson Elec. Aluminum Sm. Dynamo..... 193
Wilson, J. M., on Sulphur in Steel... 640
Wilson, Walter..... 340
Winchell's, N. H. and H. V., *Iron Ores of Minnesota*..... 3
Wing & Duffy's Smelter, Idaho..... 54
Winona Bridge..... 51
Winslow, Arthur..... 172, 316
Wire Patch Mg. & M. Co., Colo..... 171
*Wire Rope Holder, Strobach's..... 336
Wire Treatise..... 210, 236
Wisconsin Cent'l R. R..... 514
Wisconsin Mining News..174, 200, 226, 463, 514, 576, 650, 711, 735
*Wise's, W. L., Blast Furnace Charging Apparatus..... 532
Witherow, James P 572, 645
Withey, L. H..... 484
Wittenberg, C. J..... 432
Witwatersrandt Mines, S. A...56, 235, 253, 609
Wolcott Mg. Co., Colo..... 210
Wolfbauer's, E., Alumina Carbon Process..... 571
Wolverine Mine, Idaho..... 537
Wolverine Mg. Co., Mich..80, 276, 341, 394, 431, 538, 684
W. on Alaskan Mining..... 237, 420
Wood, De Volson on Pulsometer Tests 595
Wood, Henry T..... 646, 727
Wood, Herbert, on an Assay Furnace. 363
Woodbury, C. J. H..... 358
Woods, H. E., vs. Idalia & Diamond B. Mine, Colo..... 171
Woodside Mg. Co., Utah..... 489
Woodstock Iron Co., Ala..... 273, 458, 485
Woodward, Amos E., Death of..... 432
Woodward, Jabez Marshall, Death of 645
Woodworth Mill, Nev..... 224
Worcester Steel Works, Mass 78, 509
World's Coinage..... 40
*World's Fair..48, 80, 104, 129, 172, 219, 225, 235, 247, 272, 338, 347, 379, *387, 391, 392, 433, 484, 535, 538, 574, 646, 706, 727
World's Fair Mg. & Dev. Co., Mont.. 316
World's Gold and Silver Production.39, 40
Worms Destroy Lead Pipes..... 383
Worthen's, W. E., Rapid Transit Plans 433
Worthington, Henry R.....247, 682
*Worthington Mg. Pump..... 388
*Wrench and Pipe Cutter 308
*Wrench, Spartan..... 123
Wright, Carroll D., on Use of Statistics..... 191
Wright, Jr.....484, 509, 682
Wrought Iron Scrap Market Review, 19, 60, 86, 112, 178, 204, 230, 256
Wrought Steel Wheel Co..... 130
Wurtz, Dr. Henry, on Florida Phosphates..... 360
Wyatt's, Dr. Francis A., *Phosphates of America*.....380, 653
Wynkoop, Edward W., Death of..... 391
Wynkoop, W. S.....391, 706, 730
Wynkoop, W. S., on San Miguel Gold Mg. Co..... 721
W. Y. O. D. Mg. Claim, Cal..... 131, 222
Wyoming Cons. Mg. Co., Cal..... 485
Wyoming Mining News..15, 56, 108, 134, 174, 200, 226, 318, 370, 436, 463, 514, 540, 651
Wyoming Valley Coal Co., Pa..... 133

X

X. Y. Z. on Santa Fé Copper Co., N. M.....186, 237

Y

Yale & Towne Mfg. Co., Conn..... 572
Yancey Copper Mines, N. C 55
Yankee Boy Mg. Co., Colo..... 486
*Yankee Girl Ore Belt, Colo..... 162
Yankee Girl Silver Mines, Colo....53, 91, 105, 117, 249, 275, 366, 434, 459, 511, 621, 647
Yellow Boy Group Mg. Co., Colo..... 597
Yellow Jacket Mg. Co., Nev..15, 277, 317, 369, 395, 462, 488, 513, 539, 575, 599, 649, 685, 709
Yellowstone Mine, Utah..... 396
Yellowstone Mg. & Sm. Co., Mont., 173, 394, 598
York Farm Mines, Pa.....200, 711
Yosemite Mg. & M. Co, Utah..... 540
You Like Mg. Co., Idaho..... 538
Youghiogheny River Coal Co., Pa.... 107
Youngstown Bridge Works, O..... 312
Youngstown Iron & Steel Co., O 78
Youngstown Mine, Mich..... 435
Yount Mine, Nev..... 55
Yuba Mine, Cal..... 597
Yuba Mine, Nev..... 81
Yuma Copper & Silver Mg. Co., Ariz., 136, 196, 222

Z

Zeile Mine, Cal..... 573
Zenith Iron Co., Mich..... 648
Zenith Mg. Co., Minn.....224, 684
Zinc and Aluminum Electro-Deposition..... 127
Zinc and Manganese Separation..... 386
Zinc-Blend Fume, Utilized..... 565
Zinc Castings, Flaws in..... 618
Zinc, Electro-Metallurgy of..... 219
Zinc, Electrolytic Separation of..... 44
Zinc Industry of U. S 39, 45
Zinc Ores of Colorado..... 183
Zinc Producers Convention..... 363
Zinc Production in Europe..... 566
Zinc-White Industry of U. S..... 39, 45
Zirn's Mine, Nev..... 277, 368
Zone Railway System..... 40, 183, 304